

**THE RAILWAY GAZETTE**  
AND  
**Railway News**  
A JOURNAL OF RAILWAY MANAGEMENT, ENGINEERING, OPERATION AND RAILWAY NEWS.  
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## Railway Bills in Parliament

THE most important railway works proposed in Bills for the coming Session are those by London Transport which were fully described on pages 768 and 769 of THE RAILWAY GAZETTE of November 9. Notice is given by the Southern Railway of a short deviation near Leatherhead of a railway authorised in 1930, and of a railway of 3½ miles making a new connection between Lydd and New Romney. New works and a railway at the Royal Victoria Dock, and a lowering of the level of the L.N.E.R. North Woolwich branch where it passes in tunnel under the passage between the Albert and Victoria Docks are proposed by the Port of London Authority, which is also seeking power to levy dues on seaplanes using the waterway or docks of the Authority and to make charges for goods conveyed by such seaplanes. The London Midland & Scottish Railway has a Bill and a Scottish Provisional Order, and Bills are being promoted respectively by the London & North Eastern and the Great Western Railways. Additional capital powers are asked for by the Southern Railway, but not by either of the other three group companies. All four railways are making proposals as to charges on their canals and extensions of time; the L.M.S. and Southern Railways ask for alterations in their superannuation schemes, and wish to acquire lands; the L.M.S., L.N.E. and Southern Companies are taking further powers as to the retention, sale and disposal of lands; and abandonments of parts of canals are proposed by the Great Western and L.N.E. Companies.

## Sir Robert Perks

As a railwayman, Sir Robert Perks, who died on November 30, at the age of 85, will be remembered for his success in achieving—in co-operation with the late Mr. Charles T. Yerkes—the electrification of the Metropolitan District Railway, the core of the present transport system of Central London. He was Chairman at the difficult time between 1901 and 1905 when the scheme of electrification had been settled and the first electric service had been started. The public was quick to appreciate the new services but financial benefit to the shareholders was longer in coming, and it was not until 1921 that the District Railway again became a dividend payer on its ordinary stock after the long interval since 1882. Pressure of other business compelled Sir Robert Perks to retire from the board of the District Railway in 1907, but as representing large shareholding interests, he was a frequent speaker at the annual meetings of British railway companies. His attendances were chiefly at South Eastern (later Southern) Railway and Underground meetings, but in February, 1933, he was present for the first time for some years, at the Great Western Railway meeting, where he expressed cordial approval of the policy of the board in utilising reserves to maintain ordinary dividends in a time of stress.

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## The Week's Traffics

Passenger traffics last week were stimulated by travel in connection with the Royal Wedding, and it is satisfactory to see that merchandise increases were again maintained as well as gains in coal earnings on three railways. For the year to date the total traffic receipts of the four companies together are estimated at £137,611,000, an increase of £5,205,000 or 3.93 per cent. Aggregate passenger train traffics amount to £61,254,000, an increase of £869,000; in merchandise receipts, at £48,352,500, there is an improvement of £2,934,000; and coal class earnings reach £28,004,500, an advance of £1,402,000.

	48th Week				Inc. or dec.	
	Pass. &c.	Goods, &c.	Coal, &c.	Total.	Year to date	
L.M.S.R. ..	+ 15,000	+ 2,000	- 11,000	+ 6,000	+ 2,147,000	+ 4.05
L.N.E.R. ..	+ 2,000	+ 16,000	+ 7,000	+ 25,000	+ 2,047,000	+ 5.27
G.W.R. ..	+ 5,000	+ 1,000	+ 2,000	+ 8,000	+ 596,000	+ 2.65
S.R. ..	+ 14,000	+ 1,500	+ 500	+ 16,000	+ 415,000	+ 2.29

Mersey Railway traffics continue to hold their own and show an increase to date of £3,644. London Transport receipts for last week improved by £44,500.

\* \* \* \*

## The Welsh Highland Railway

For some years past the seasonal closing to passenger traffic of the Welsh Highland Railway has been interpreted by various daily newspapers as permanent abandonment "owing to omnibus competition." Actually, since the line was completed in its present form on June 1, 1923, the railway has never been definitely closed, and goods and mineral trains have been worked constantly. Passenger traffic is normally suspended between October and June, but at the beginning of this year there were real fears of complete abandonment and dismantling of the railway through financial failure. After prolonged negotiations an agreement was concluded in June last whereby the Welsh Highland Railway was leased at a nominal rent to the Festiniog Railway and passenger service was recommenced on July 9. Under Festiniog management this was continued until October 13, when it was suspended for the winter, but goods and mineral trains are still being operated. Foremost in the negotiations which saved the Welsh Highland Railway from abandonment, was Mr. Evan R. Davies, Mayor of Pwllheli, whose sudden death on Sunday morning it is our regretful duty

to record this week. He was a Director of the Welsh Highland and Festiniog Railways, and Snowdon Mountain Tramroad, and his firms acted as solicitors to these companies. The interesting creation of the Welsh Highland Railway out of a series of disconnected narrow gauge lines, including the ancient Croesor horse tramway, formed the subject of an illustrated article in our issue of October 26, 1923, and was also referred to in an editorial note on January 5 of the present year.

\* \* \* \*

#### Six Miles a Penny

The L.N.E.R. return excursion from Ipswich to London at 3s. for the 137 miles to which we referred in our issue of November 23 is eclipsed by an L.M.S. facility of December 1 last. In connection with a cattle and poultry show at Bingley Hall, Birmingham, passengers from Bath were provided with a special train in which they travelled to New Street and back—187 miles—for 2s. 9d., or very nearly six miles for a penny. A correspondent who sends us a handbill advertising the excursion remarks that on August 6, 1855, the Midland Railway is recorded to have conveyed 7,000 persons from Bristol to Birmingham and back for 1s. 6d. a head. No less remarkable, in that they were more regular, were the pre-war excursions of the Great North of Scotland Railway from Aberdeen to Boat of Garten on Wednesdays and Saturdays in the summer months—202½ miles return for 2s. 6d. For a short time, also, there was a Sunday excursion by the Great Central Railway from Marylebone to Cleethorpes for 4s. 6d., a return journey of some 450 miles by the shortest G.C. route.

\* \* \* \*

#### Faster New York-Chicago Service

It is but a couple of years ago since the shortest journey time between New York and Chicago, made by the Broadway Limited of the Pennsylvania R.R., and the Twentieth Century Limited of the New York Central Lines, was 20 hr. A substantial supplement was exacted for the privilege of transport at this speed, and passengers by 21-hr. and 22-hr. trains were similarly though less heavily taxed. Now that the two famous trains first-mentioned have come down to a journey time of 17½ hr., and the supplement for their use has been standardised at \$10, a number of other expresses, by which all supplementary charges have been abolished, have been brought in time below the previous 20-hr. minimum. Further accelerations became effective at the beginning of October last, and an entirely new train, called the Fort Dearborn, was introduced, leaving Chicago 10 min. before midnight, and running to New York in 19 hr. A couple of hours earlier the Gotham Limited leaves Chicago, at 10 p.m., and reaches New York at 6.30 p.m.—a journey which, allowing for the change of time *en route*, takes 19½ hr. In the other direction the Pennsylvania Limited leaves New York at 1.35 p.m., and the Progress Limited at 10.35 p.m., the former occupying 19½ hr., and the latter 19 hr. 55 min. The route is 908 miles in length, and passes on the way through the Alleghany mountains, reaching the summit level at Gallitzin, 2,194 ft. above sea level, and approached from the east by 11·8 miles of ascent averaging 1 in 64.

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#### Mexican Railway Half-Year

Facilities for the entry of tourists to Mexico granted by the Government, together with the propaganda of the railways, brought an increase in passenger traffic to the Mexican Railway for the first half of 1934 in comparison with the first half of 1933. The rise in the value of silver, and the stabilisation of exchange at a low figure, all

tended to improve trade, and this was reflected in all classes of goods traffic receipts. Crude oil and refined petroleum, firewood, wines, liquors, and beers gave the principal increases in tonnage. More maintenance work was done, and the growth of traffic brought an increase in transportation expenses. Agitation among the railway unions has stopped for the present the transfer of shopmen from Orizaba to Apizaco shops. In the accompanying table results are compared for the first six months of 1934 and 1933 respectively:—

	1934.	1933.
Passengers .. ..	844,620	808,350
Paying goods, tons ..	426,076	363,737
Traffic train-kilometres ..	1,175,043	1,082,264
Average haul, km. ..	207·68	195·54
Operating ratio, per cent. ..	87·36	97·60
	Pesos.	Pesos.
Passenger receipts .. ..	1,546,693	1,324,576
Goods and livestock receipts ..	4,128,005	3,176,931
Gross receipts .. ..	5,994,833	4,753,339
Working expenses .. ..	5,237,352	4,639,337
Net receipts .. ..	757,481	114,002

During the half-year under review the rate of exchange on London has been approximately 18 pesos to the £, and on this basis the net receipts are equivalent to £42,082.

\* \* \* \*

#### Railway Acceleration

In discussing the matter of modern train speeds, attention is apt to be concentrated on passenger services, although it is probable that more remarkable accelerations have actually taken place in goods services. In our News Section this week will be found a note of certain recent speeding up of L.N.E.R. freight trains, made possible by the provision of specially constructed wagons fitted with continuous brakes. The L.N.E.R. is, of course, no exception, and the other British main line companies have also been pursuing a policy of accelerating their goods services with the main object of achieving what is known as next-day delivery. On the Continent, too, where the provision of continuous brakes on goods trains has become general, goods services have been quickened. The effect of the speeding up of both passenger and goods trains is, of course, to give better facilities all round to the public, but unless there had been corresponding advances in methods of maintenance of both rolling stock and permanent way, the cost would have been prohibitive. As it is, such has been the general improvement in railway operating methods that operating costs have been steadily dropping as the service to the public has been improved.

\* \* \* \*

#### Level Crossings

The fatal derailment of a passenger train at an occupation level crossing at Wormley on November 27, involving the death of the enginemen, calls for a note as to the difference between an occupation and a public road level crossing. There are three kinds of level crossings: (1) the public road, (2) the occupation, and (3) the public footpath. All these have to be shown on the plans that are submitted to Parliament for sanction for the construction of the railway concerned, and all have to be included in one of the numerous tables that are sent to the Ministry of Transport when the line is ready for inspection. Moreover, under the Standing Orders, every public road crossing has specifically to be reported upon by one of the Inspecting Officers. These crossings, too, under the requirements of the Ministry have to be equipped with suitable gates, protected by signals, and gates and signals suitably interlocked. As a consequence of these precautions and of the care exercised by the railway companies there were only seven persons killed at public road level crossings last year, of whom six were pedestrians.

Occupation crossings come, however, in a totally different category. They are provided, under the Railway Clauses Act, 1845, for the accommodation of owners and occupiers of land whose property has been separated by the new railway. The companies will have paid for any inconvenience caused by such separation, and their responsibility therefore ends at the provision of the crossings. Occupation crossings are not therefore in any way protected—as the annual accident report each year observes in relation thereto, “no specific responsibility is placed upon railway companies by legislation for safeguarding the movements of road vehicles or pedestrians.” There were, however, only thirteen persons killed at occupation crossings last year, of whom six were pedestrians.

\* \* \* \*

### New Safety Rules in Sweden

On October 1 the Swedish State Railways brought into force a new rule book covering signalling and safe working generally. The growth of power signalling, the extensive use of light signals, better brakes and other improvements had for some time made new regulations desirable. In this country it is customary to have a General Rule Book and supplement it by special instructions and appendices, but abroad there are often several rule books dealing with different sections of the service. The volume in question is confined entirely to signalling and operating rules directly bearing on safety, such as the working of brakes, running over lines under repair, and the arrival and departure of trains at stations. An interesting feature of Swedish traffic working is the special whistle signal given, when a driver sights a home signal at “stop,” to indicate that he is prepared for an obstruction ahead or to travel over a route not usually set for him. Under certain conditions the signal must not be cleared until this whistle is heard. This practice might be worth considering in connection with the difficulty sometimes experienced with our Rule 39a, where a premature lowering of the signal may mislead a driver. With the Swedish rule the signalman can assure himself that the driver is prepared to find the section ahead occupied. Too much whistling is, however, objectionable.

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### Higher Speeds and A.T.C.

Such high speeds as those exhibited between London and Leeds on the L.N.E.R. on November 30 and those that are possible with streamlined trains and railcars, appear to call for a consideration of the distance by which distant signals should be separated from their home signals. That was a point raised by Mr. Lascelles, in the discussion on the distant signal problem at the Institution of Railway Signal Engineers on October 10, in relation to the Flying Hamburger and other high-speed trains on the Continent. Since then we have been able to announce—see page 792 of our issue of November 16—that the German State Railway is extending the distance for distant signals on many lines so as to provide for speeds up to 120 km.p.h. (75 m.p.h.). We would suggest that these higher speeds also call for a reconsideration of the question of automatic train control, which, incidentally, is being widely extended in Germany, as described in our issue of September 7, page 382. There is no need for us to point out the desirability, with these higher speeds, for the driver to have a prompt and definite intimation as to the condition of the distant signal and, equally so, for action automatically to be taken in case he fails to respond to that intimation. Another factor is that, as the claim for these trains is their higher speed, automatic train control facilitates the maintenance of speed in foggy

weather. On the latter point we would observe that in *The Times* of November 24 appeared a letter recording the arrival of the Cornish Riviera Express at Paddington two minutes before time on Monday, November 9. As that was one of the worst days of a week of dense fog the writer of the letter was unintentionally paying a compliment to the A.T.C. system of the G.W.R.

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### The Southern Baltics Converted

Between the years 1914 and 1922 Mr. L. B. Billinton, then Locomotive Engineer of the London Brighton & South Coast Railway, designed and built at the company's works at Brighton some powerful 4-6-4 type express passenger tank engines, principally for working fast passenger trains between London and Brighton. These engines performed with conspicuous success the duties for which they were designed, but on the electrification of the Brighton line no suitable work remained for them on that section or elsewhere, in view of their limited coal and water capacity. Furthermore, the loading gauge of the former L.B. & S.C. Railway, to which these engines were built, was less restricted than the limits obtaining on the other companies now comprising the Southern group, and consequently their use has hitherto been confined to the Brighton section. For this reason, Mr. R. E. L. Maunsell, the present Chief Mechanical Engineer, decided to rebuild the engines to the dimensions shown in our article on page 945, and to provide them with tenders, and the conversion of the whole series is now being carried out. The illustration on page 944 shows that a very handsome-looking engine results. The external alterations bring the rebuilds within the loading gauge of the Southern Railway and they can now be used on any of the main lines other than the Tonbridge to Hastings section. Although the opportunity has been taken to name the engines after past locomotive engineers, the L.B.S.C. war memorial engine No. 2333, *Remembrance*, retains its former title, which has been adopted as the class name for the series.

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### Locomotive Boiler Tubes

Whilst a locomotive boiler tube may be an object of little interest to others than the mechanically minded, its essential functions and strenuous service cannot be overlooked. As Mr. G. H. H. Collins pointed out in a paper before the Institution of Locomotive Engineers on “The Manufacture and Repair of Locomotive Boiler Tubes,” a locomotive boiler has to have its tubes replaced at each general repair, while often a further set may be required between these shoppings owing to the amount of scale deposited on their surfaces. The cost of re-tubing is no small item in locomotive maintenance and anything claimed to improve and prolong the life of the tubes is therefore worthy of consideration. One of the principal questions arising from this subject is of what material the tubes shall be made. As early as 1874 the L.N.W.R. was using weldless copper tubes in some of its passenger engine boilers, although the goods engines were fitted with iron tubes. About this time, also, the Stockton and Darlington section of the North Eastern Railway was using tubes of Lowmoor iron. On the Great Western Railway it is believed that all the broad gauge engines had brass tubes, but between 1866 and 1870 a gradual change over to Staffordshire iron was made under Mr. Armstrong and experiments were carried out with steel tubes. Increasing boiler pressures caused the railway companies to try the weldless steel tube, which to-day finds a very wide application in practically every railway shop.



## Passenger Fares for 1935

THE most effective step taken by the railway companies during the last few years in the direction of encouraging rail travel has been the introduction in May, 1933, of "summer" tickets in place of the former long-period excursion tickets. The popularity of "summer" tickets with the general public arises from the reasonable fare basis (1.66d. a mile first class and 1d. a mile third class), the extension of the availability to one month, and last, but by no means least, the freedom from all restriction as to train services. This class of ticket was introduced experimentally, but public support has now enabled the companies to decide that as from January 1, 1935, the facility will become a permanent feature of British rail travel. The opportunity is being taken, however, to re-name the tickets with the more appropriate title of "monthly return" tickets, although this title does not clearly indicate that they may be used for day, weekend, or visits of any duration within the limit of one month. In pursuance of their policy of removing all unnecessary restrictions on travel, the availability of the forward halves of these tickets is to be extended from three days to one month, thus making the tickets available for use on the outward and return journeys any day within one calendar month from the date of issue. The holders will also become entitled to break their journeys in either direction and in many cases, where two or more railways operate in the same territory, alternative routes will be available for the return journey.

The steady decline of first class travel has been a difficult problem for some time, but in order to stimulate the slight improvement which has become manifest this year in first class travel at reduced fares, the companies have decided to make an experimental reduction of 10 per cent. in first class reduced fares only. The basis of these fares will therefore become 50 per cent. over the third class fare instead of 66.66 per cent. as at present. In the case of "monthly return" tickets this means that passengers who, before the introduction of "summer" tickets in 1933, paid 1½d. a mile for third class travel, will as from January 1 next, be able to travel first class at the same rate, while in the case of day and excursion fares the first class will be even lower. This reduction has also enabled the minimum fare for "monthly" tickets, first class, to be reduced from 8s. 6d. to 7s. 6d. in the case of the Southern Railway and from 4s. to 3s. 9d. in respect of the other three main line companies. The higher minima of the Southern is due to the special conditions pertaining to that line, which is a predominantly passenger carrying concern with much shorter average journeys than the other main line railways. To reduce the minimum fares to the same level as the others, therefore, would involve such a concession as to involve an actual loss.

Tourist tickets, which are at present issued between a large number of stations from May 1 to October 31, at the single fare and five-sixths for the return journey, with an availability of three months, have declined in popularity with the growth of "summer" tickets and circular tour travel. The rate for the latter form of travel is three-fourths of the ordinary single fare, from point to point, which is equal to single fare and one-half for the through-out journey. In order to adjust this position, therefore, the companies propose to reduce "tourist" fares to the level of circular tour fares by making a cut of 18 per cent. In the case of first class tourist fares, however, passengers will also benefit by the general reduction of 10 per cent. in first class reduced fares, which will make the total reduction in first class Tourist tickets no less than

26 per cent. or from 2.29d. to 1.69d. a mile approximately. In addition the minimum first class fare will be reduced from 25s. to 22s. 6d. It has not been found possible to reduce ordinary or standard fares owing to the substantial proportion of revenue which is still earned from these tickets and to the fact that the whole range of reduced fares is based upon the ordinary single fare. In order to give some concession to the users of ordinary return tickets, however, the companies propose to extend the availability of the outward halves from three days to three months, and thus the holders will be able to use their tickets on the outward or return journeys on any day within three months from the date of issue. These tickets are also available for break of journey in either direction and for alternative routes when two or more companies operate in the same area. These modifications in the level of fares and the abolition of restrictions obviously necessitate the immediate sacrifice of a substantial amount of revenue without any guarantee that sufficient additional passengers will be secured to offset the loss involved. At the same time there is little doubt that the policy of reduced fares, enlarged facilities and freedom from restrictions will prove extremely popular, and the companies hope to secure at least an appreciable increase in their passenger traffic during next year.

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## Speed Possibilities with Steam

IT is probably safe to say that many of the figures obtained on the remarkable journeys from London to Leeds and back on the London & North Eastern Railway on Friday, November 30, have never before been equalled or even approached with steam as the motive power. That a standard steam locomotive, taken out of ordinary service after having run over 653,000 miles in the eleven years since it was built and 44,176 miles since its last repair, should, in a round trip comprised within the limits of one single day, travel for a total of 250 miles, hauling a train, at an average speed of 80 m.p.h. over the substantial ups and downs of the L.N.E.R. main line, was in itself certainly a unique performance. Never before, we imagine, has such an average speed as 82½ m.p.h. been maintained up ten miles of a lengthy ascent finishing with 1 in 200 and 1 in 178 with an absolute minimum of 81 up the final three miles at the last mentioned inclination. Such a feat demonstrates something of the possibilities of the modern locomotive working hard, for the cut-off was as much as 40 per cent. at this high speed.

Much has been made of the 100 m.p.h. maximum claimed to have been achieved on the return journey down these gradients, but we regard as even more important the fact that an average of more than 97 m.p.h. was maintained for 3½ miles continuously. On this length the dynamometer car readings show an increase to a decided peak speed of 100 m.p.h. for about 600 yards, whereas the independent records made by observers on the train working with stop watches off the mile-posts, vary from this figure down to 98 m.p.h., which represents a difference of merely one-fifth of a second in the reading over a quarter of a mile. It is possible that, as these readings were not being taken consecutively, the peak was reached in one of the quarters not timed by every observer, so that, in effect, there is no discrepancy. So successful was the down run in bettering by 13 minutes the provisional schedule of 165 minutes for the 185.8 miles that it was decided to increase the load for the return journey from four to six coaches, and even so the 165 minute schedule was improved upon by 7½ minutes in this



direction, including an out-of-course check for permanent way relaying at Sandy, which cost  $1\frac{1}{2}$  min.

What is clearly shown by these test runs is the capacity that still remains in the modern steam locomotive with ample boiler power, long-travel valves, and every detail carefully designed in the light of practical experience. It is obvious that with the very latest refinements in the way of streamlining and front-end improvements it should be possible to reach even higher speeds than those achieved last Friday. We do not think that any very useful purpose can be served in making comparisons between this trial run and the normal schedule of the Flying Hamburger, which day in and day out covers its 178 miles of almost level line in 138 minutes, start to stop, at an average speed of  $77\frac{1}{2}$  m.p.h. This is a light streamlined articulated unit specially designed to maintain speeds of 100 m.p.h. continuously on a level line, and it apparently does so without any difficulty. On the other hand the standard L.N.E.R. Pacific locomotive is designed for the haulage of heavy loads at the current express speeds of the company concerned. The initial cost for such a unit as the Flying Hamburger is probably high, but, for the special services which it can render, its running costs should be lower than that of the steam locomotive. What has been finally demonstrated beyond any doubt by the recent enterprise of the L.N.E.R. authorities is that the possibilities of the ordinary steam locomotive have not yet been exploited to the maximum extent, and it is safe to anticipate that before long we shall see still further accelerations of main line services, and, we hope, a general levelling up of the speeds of many of the slower trains.

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### Travel Publicity

THE close association of the railway companies with the Travel and Industrial Development Association of Great Britain and Ireland lends special interest to the report of its sixth year of activity, upon which we commented briefly last week. This report indicates clearly the comprehensive nature of the work carried out by the association, ranging from advertising, exhibitions, broadcasting, and the preparation of films and posters, to the production and distribution of booklets and folders throughout the world. The principal publications of the association are the well-known *Calendar of Events*, now published in four languages and distributed in many countries, *Coming Events*, *Industrial Britain*, and the *Hotel Guide*, all of which are now presented in improved forms. In consultation with the industrial development officers and with the co-operation of the appropriate Government departments, trade associations, and other bodies, an industrial handbook dealing with Great Britain has been published with the object of giving preliminary information to manufacturers from overseas considering the establishment of factories in Great Britain. By co-operation with hotels and resorts it has been possible to insert a large number of effective "combined" advertisements in the Continental press, while co-operative advertising on behalf of Lancashire as an industrial centre has appeared in a number of Continental, American and Dominion journals. Exhibitions were arranged at the annual International Fairs at Paris and Lyons, as well as at the Canadian National Exhibition at Toronto. A series of 36 wireless talks on the British Isles has been broadcast individually from over 200 radio stations in the United States and Canada, eliciting some hundreds of appreciative letters.

The definite results of the association's work are naturally somewhat difficult to measure. On the travel side,

the official returns issued by the Home Office of foreign visitors during the year ended March 31 last, excluding day and week-end visitors without passports, showed an increase of over 23,000 compared with the previous year, an increase which, incidentally, has continued monthly since that date. These figures do not cover visitors from the Dominions and the Colonies with British passports, whose numbers have increased substantially, while the day and week-end visitors from the Continent have increased from under 10,000 in 1932 to over 50,000 last year. The results of industrial and general publicity are harder to assess. Arising from *Industrial Britain*, a large number of enquiries was received regarding the establishment of factories in Great Britain, or the manufacture of goods under licence, and as to the sources of supply of products referred to in the bulletin. There is no doubt that the general and industrial publicity of the association has disposed the minds of purchasers favourably towards British goods, while the body claims a share of the credit for the widespread appreciation of this country as a manufacturing and producing centre. In this connection the Executive Committee lays emphasis on the fact that an increase in tourism, which is considered to be in itself an export trade of great importance amounting to over £20,000,000 per annum, results in increased prosperity for most of the industries of the country.

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### On Time

A SIMPLE formula, well known to Euston House but long since lost amid the palace archives of the popular press in Fleet Street, ensures to every L.M.S.R. staff publication a readability and appeal which owe nothing to the idiom of America or the disjointed and staccato smartness of ultra-modern journalism. *Quota News* has already demonstrated the effectiveness of the recipe, and now the Operating Department has put its hand to the pen and produced *On Time*. The first number opens with an article by Mr. C. R. Byrom, in which he explains the spirit behind the paper and its title. *On Time* represents something more than the punctual arrival of a train at its destination. That is only one step in providing efficient transport. It is to inculcate the ideal of smooth working and punctuality into the many complementary operating services involved in the carriage of the smallest item from consigner to recipient that the paper has been launched. A feature of the journal is to be "The Month's Best Log," recording notable instances of locomotive performance. The run selected for the first issue is one from St. Pancras to Nottingham by the 9.0 a.m. Scotch express with 5X class 4-6-0 No. 5523 hauling a heavy week-end train of 326 tons tare. Nottingham,  $123\frac{1}{2}$  miles, was reached in a fraction over 126 min.—the schedule is 129 min.—in spite of two signal checks. An attractive heading, borrowing something from the sporting style of *Quota News*, and a picture of Driver W. G. Pickthorn and Fireman T. W. Samuel, the enginemen responsible, on the footplate, contribute to a brightly written article which will attract even those not primarily connected with locomotive working and encourage emulation in their own spheres. *On Time* is well illustrated, with a complete back page of pictures and others in the text. Its practical value will be enhanced next month by the first of a series of articles by Mr. D. C. Urie, Superintendent of Motive Power, explaining how to achieve the best results with the new locomotives now being so widely introduced on the L.M.S. The title of the paper reflects a laudable spirit, the translation of which into substance should be accelerated by the guidance and encouragement *On Time* affords.

## LETTERS TO THE EDITOR

(The Editor is not responsible for the opinions of correspondents)

### Steel Sleepers

Iraq Railways,  
Office of the Chief Engineer,  
Baghdad, November 19

TO THE EDITOR OF THE RAILWAY GAZETTE

SIR,—In connection with the two letters printed in THE RAILWAY GAZETTE of September 7 last on "Two Views on Steel Sleepers," you may be interested to learn of an experience on these railways where a broken axle occurred on a section of track in which wooden sleepers followed some miles of steel track.

In this instance six steel sleepers were damaged beyond repair, but 300 new wooden sleepers were necessary. The damaged vehicle travelled over the same length of each type of track. While the comparative damages are perhaps no convincing argument in favour of either type of sleeper, the disparity in numbers is very interesting.

Yours faithfully,  
A. C. HOLT,  
Chief Engineer

### British Passenger Train Punctuality

4, Limerick Road,  
Redland, Bristol, 6.  
November 30

TO THE EDITOR OF THE RAILWAY GAZETTE

SIR,—In your issue of February 9 you were good enough to print a letter from me giving details of some extraordinary punctuality experienced north of the Border. I venture, therefore, to send further brief details taken during Novem-

ber. These are, perhaps, even more remarkable when it is remembered that although passenger traffic is at a comparatively low ebb, weather conditions and less daylight are factors which tend to cause delay. The journeys involved were taken at random in all classes of passenger train from expresses down to local and even "mixed" trains over a wide area stretching from Berwick and Carlisle to Inverness and Arbroath. They include 17 trains running through districts where the track occupation is heavy, i.e. Falkirk, Dunfermline and Thornton Junction. It is inevitable that 10 out of a total of 14 minutes lost by signal delays should have to be debited to those districts.

Total distance travelled	1,311 miles
Number of trains used	34
Number of trains punctual throughout	29

#### Details of time lost by remaining five trains—

	Minutes
By engine*	13
By signal delays	14
By station delays	7
By permanent-way slacks, &c.	4

Total ... 38

#### Details of time recovered by above five trains—

By engine	27
At stations	6

Total ... 33

Net time lost ... 5

\* Partially due to some rather ambitious schedules on short distance non-stop runs.

As before the results reflect the greatest credit on the train operation in the areas affected.

Yours faithfully,  
C. R. CLINKER

## PUBLICATIONS RECEIVED

**Locomotives of the Southern Railway.** Southsea, Hants: Coffin & Allchin, 86, Essex Road. 6½ in. × 8 in. 20 pp. Price 2s. 0d. net.—This booklet is a companion to those issued by the same publishers giving lists of numbers and names of L.M.S.R., L.N.E.R. and G.W.R. locomotives, and provides for the railway enthusiast a list of classes, building dates and names of all locomotives at present running on the Southern Railway.

**Daily Mail Year Book, 1935.** Thirty-Fifth Year. London: Associated Newspapers Limited. 7½ in. × 4½ in. 290 pp. Price 1s.—Nineteen hundred and thirty four has nearly gone, and we are reminded of the fact by the appearance of the "Daily Mail Year Book" for 1935. For the most part it is a story of the present year, a sort of school report of the world, and in particular the Empire. So far as the railways are concerned, it may be justly claimed that the record of the activities provides some of the brightest pages. Mr. H. G. Archer has given an impression of the events of the year in just over three pages, an impression such as one might gain from leafing over the pages of THE RAILWAY GAZETTE for the period. Train service improvements and speed accelerations occupy most of the story, while such develop-

ments as the formation of Railway Air Services, the preparation of the Channel train ferry, and the introduction of the railcar on the G.W.R. also find their place. Progress and not retrogression is the prevailing tendency.

**Winter Tours.**—The programme of the National Union of Students for holidays this winter adds facilities for boar and lynx shooting in Poland to the more usual forms of winter sport. Ski-ing centres in Austria, Germany, and Switzerland provide for all grades of visitor from the novice to the expert capable of undertaking long and arduous excursions. The fees quoted for the tours are extremely moderate and calculated to relieve considerable anxiety towards the end of a holiday by definitely including every form of extra, whether tips or taxes. Allowance is made for third class rail travel, with supplement for second class if desired.

**Pedestrian-operated Signals.**—An illustrated pamphlet describing Holmes-Reyrolle pedestrian-operated traffic signals has been published by J. H. Holmes & Co. Ltd., Hebburn-on-Tyne. The signals are of the electric colour-light pattern, showing two aspects—"Don't cross" and "Cross now"—to pedestrians, and the usual three to vehicular traffic. The push-button controls whereby pedestrians can secure the

right of way are mounted on panels on the signal standards. Operation of the push-button changes the lights in favour of foot passengers for a fixed period, after which the right of way is automatically restored to road traffic and cannot be interrupted until a further determined interval has elapsed. Repeater lights alongside the push-buttons show the pedestrian when the signals change in his favour without his having to watch the main lights. If the button is pressed during the period allotted to uninterrupted road traffic, the indication is stored up and becomes operative immediately the road interval is over.

**Verkehrseinheit und Verkehrspolitik.** (Unification of Transport and a Transport Policy.) By Prof. Dr. Ing. Carl Pirath. Berlin: Verlag der Verkehrswissenschaftlichen Lehrmittelgesellschaft m.b.H. 8 in. × 6 in. 34 pp. Price RM. 1.65.—This lecture, given as one of a course on railway science for officers of the German State Railway, deals in a broad, general and thoughtful manner with the problem, so much discussed of recent years, of the unification and co-ordinated working of the different systems of transport, as well as the institution of a definite national policy on the matter in the Germany of to-day. Conditions there are now rather favourable to this course, and the placing of the new "Reichsautobahnen" under the same general management as the railways is an example of the tendency dealt with by Dr. Pirath in his address.

## THE SCRAP HEAP

### DIESEL DELICATESSEN

We understand there is no truth in the rumour that Appenrodts of Piccadilly are acquiring a licence to manufacture the Hamburger Flyers referred to in *The Daily Telegraph* of last Saturday.

### DEPRESSION OBSESSION

One of the employees of J. Stone & Co. Ltd., the manufacturers of the Stone-Cardew track depression indicator (described in *THE RAILWAY GAZETTE* of April 20 last), when completing his time card recently, wrote in the column provided for the description of work done: "Dismantling, testing and reassembling trade depression indicator."

After the train had run on a kind of trestle stilts over a sort of Fen Country a thousand times the proper size, it approached New Orleans, one of the world's largest cities, for mile after mile like running through a garden; a rich man's garden, for there seemed to be no slums or poor quarters. But it was all smart, neat houses, with no rails or fencing, but the train passing actually at the end of each family lawn... with, of course, our locomotive bell clanging all the time.—*John Gibbons* in "Suburban Columbus."

### BRITISH RAILWAY NICKNAMES

In connection with our recent publication of some U.S.A. railroad nicknames, a correspondent writes that the old L.B. & S.C.R. of England was frequently referred to as "Ladies Boots and Shoes Cleaned Regularly." Does any reader know why? The phrase certainly contains no obvious implication such as "Old Worse and Worse" for the Oxford, Worcester and Wolverhampton Railway; or "Great Way Round" for the G.W.R. before its cut-offs were built about 30 years ago.

### STOUT MAN'S COMFORTER

For many years, when travelling by rail, writes a stout correspondent, I have regarded myself as probably the most unpopular man in the train. If there are three or more in a compartment my additional bulk is regarded as a scandalous case of overcrowding. Hence, railway journeys are to me, a sensitive person, a series of nightmares; and I can imagine, in the future life, no more terrible punishment than to be condemned to be for ever catching trains. This week, however, I have achieved popularity for the first time. I achieved it involuntarily and instantaneously. As a last resort I got into a compartment full of school children. In my confusion I sat down my 14 stone on my best bowler. I was instantly acclaimed as a heaven-sent entertainment. I was offered assorted sweets,

chocolate, bits of sticky rock, and, finally, a bunch of fag-pictures. I was the hit of the evening. In future I intend always to travel in such company. After all, one can buy bowlers of a sort at half a crown each, and that is a small price to pay for popularity through a long railway ride.—*From the "Manchester Guardian."*

We started on again (from Cuneo) by another train for Limone, timed to accomplish the intervening twenty miles in two hours. The official estimate of its speed was justified by the event. It was a friendly sort of train; dogs ran beside it for a mile or two;

people shouted from its windows to their friends in the fields; the guard was obliging enough to go off at one station to the neighbouring village and buy us a couple of Virginia cigars, amusing to light, though less satisfactory to smoke. The train wound up a charming valley and crept through a series of tunnels, some of which are corkscrew in form, after the St. Gotthard manner. . . . The railway is in active construction above the village, and is destined to be carried through a long tunnel down to the Mediterranean at Ventimiglia.—*From "The Alps from End to End," by Sir Martin Conway (1895).*

"Veteran fireman says good-bye to his old locomotive." A tender farewell.—*From "The Star."*

## GREAT EASTERN RAILWAY COMPANY.

# THE HARWICH ROUTE

— TO THE —

## CONTINENT

Via ANTWERP and ROTTERDAM,

DAILY (SUNDAYS EXCEPTED).

THE Boat Express leaves London, Liverpool Street Station, at 8.00 p.m. every week day, running alongside the steamers at Harwich (Parkeston Quay). A Dining Car for First and Second Class Passengers and First, Second and Third Class Corridor Carriages with lavatory accommodations, run (Sundays excepted) between Doncaster, March and Harwich. Passengers can change into the Dining Car en route. Through carriages are also from Manchester and Doncaster, via Lincoln and March; Birmingham and Rugby, via Peterboro' and March; connecting at these stations with Express Trains from Scotland, the North of England, and the Midland Counties. The steamers leave after the arrival of these trains at 9.50 p.m., and reach Antwerp and Rotterdam the following morning. The service from Antwerp and Rotterdam is at 5.45 and 6.15 p.m. respectively, every week day, connecting with Express Trains from the interior of the Continent.

The Great Eastern Railway Company have now placed on this service new steamers upwards of 1000 tons register and 3000 indicated horse-power, which are amongst the finest running between England and the Continent, and are fitted with every convenience and comfort for passengers, including Ladies', Dining, and Smoking Saloons, Sleeping Berths in Separate Cabins, and the Electric Light. The latest additions to the company's fleet are twin screws, each engine being capable of being worked separately in the event of accident, which, together with water-tight compartments, insures the greatest possible safety.

At Parkeston Quay (Harwich), the company have opened an hotel for the convenience of passengers to and from the Continent; there are also first and second-class restaurants, waiting rooms, and lavatories, all of which are connected with the landing stage by a covered way.

Cheap through and Tourist Tickets at low fares, embracing Holland, the Dead Cities of the Zuyder Zee, Belgium, the Ardennes, the Rhine, North and South Germany, Austria, Italy, the Tyrol, Switzerland, etc., are issued by this route from London, Liverpool, Manchester, Sheffield, Glasgow, Edinburgh, Newcastle, York, Hull, Birmingham, Rugby, and the principal Northern and Midland Towns.

Read the New Edition of the "Tourists' Guide to the Continent," profusely illustrated; "Walks in the Ardennes," "Walks in Holland," 6d. each, post free 8d.

### EXPRESS SERVICE TO HAMBURG,

on Tuesdays, Fridays and Saturdays, by the passenger steamers of the General Steam Navigation Company, from Parkeston Quay (Harwich), in connection with the trains mentioned above.

For any further information, Guides, Time Books, etc., apply to any of the Great Eastern Railway Company's Agents; the Booking Offices of the Principal Towns in Scotland, the North of England, and the Midland Counties; to 61 Regent Street, London; or to

**F. GOODAY,**

Continental Traffic Manager.

LIVERPOOL STREET STATION,  
LONDON, E.C.

A former Great Eastern Railway Company's Harwich to the Continent advertisement, reproduced from an American Travellers' Guide of 1894



## OVERSEAS RAILWAY AFFAIRS

(From our special correspondents)

*New Zealand safety record still unbroken—Proposed railway between Mysore and South India—Eritrean Mallet simple locomotive—Details of new Egyptian mixed traffic locomotives—Proposed new Yangtze bridge at Hankow—New works to be carried out on various French railways*

### NEW ZEALAND

#### Railway Safety

The excellent safety record of the New Zealand railway system is apparent when it is realised that in the last nine years, to September 30 this year, 205,000,000 passenger journeys have been made by rail in the Dominion, and in that time not one fatality among passengers has occurred for which the Department could be held responsible.

#### Further Financial Improvement

With six months of the current financial year gone, the gross revenue to September 15 has increased by £175,697, and expenditure has increased by £120,118, resulting in an increase in net revenue for the half year of £55,579, as compared with the corresponding period in the last financial year. Steady improvement in the financial returns has now continued without exception from month to month almost from the inception of control by the Railways Board in 1931, the total improvement now amounting to £765,493.

#### New Station at Wellington

In laying the foundations for the new station at Wellington, the contractors have had to contend with a site that is wholly reclaimed land. This inevitably entails the usual battle with the tides, for seepage from the harbour goes right through loose reclaimed land, even if it is a quarter of a mile away from the water-front. Wellington contractors, however, are familiar with such conditions, and know how to deal with them. The foundations, so far as the work has proceeded, consist of some 900 16-in reinforced concrete piles and a vast network of timbered trenches, bristling with steel reinforcement rods, which are steadily being filled in with concrete. These trenches outline the interior walls of the entrance, the extensive ticket lobby, and the concourse leading to the eight platforms beyond. So far there have been no obstacles out of the ordinary to check the normal progress of the work.

Especially care has been taken in designing the ticket lobby so as to avoid, as far as possible, traffic jam. As soon as the traveller enters the

lobby he will turn immediately to the right, where there is a number of ticket offices. Then still following the wall round, he will find the office for reserving seats, and still further on—on the northern side of the same great hall—he will be able to check or register his luggage. He will then pass through the concourse to one of the platforms. This arrangement ensures freedom from confusion with the exit traffic, which will come straight across the lobby to the main entrance.

#### Increasing Night Travel

The increasing desire to save time by night travel, even at some inconvenience in other respects, is seen in a recent South Island innovation on the Midland line between Canterbury, the Otira Tunnel (through the Southern Alps) and Westland. For some time there have been demands from both sides of the tunnel, for the attachment of a regular passenger car to each of the night goods trains. Hitherto such a passenger service has been intermittent, but in future a "bird-cage" car will be regularly run on these trains. This service is in considerable demand for week-end mountaineering as well as for business purposes.

### INDIA

#### Mysore Railway Extension

The question of extending the Mysore Railway from Chamrajnagar to connect with the South Indian Railway via Satyamangalam, is now engaging the attention of the Government of India and the Mysore Durbar. Engineering and traffic surveys in this connection have been completed and if the line is finally sanctioned the construction will rank among the important engineering achievements in this country. The new line will be 56 miles in length, of which 11 miles will lie within Mysore territory and 45 miles in British India. The alignment surveyed includes a 21-mile ghat or hill section in which there will be 28 tunnels aggregating about 3 miles in length, and a fall in level of over 2,000 ft. will occur in 31 miles. These engineering difficulties account for the high cost of construction which is estimated at approximately Rs. 2 crores or £1½ millions. In spite of this heavy capital expenditure

the line is expected to yield a return of 6 per cent. within five years of its opening. The Mysore section of the line is estimated to cost Rs. 8-36 lakhs and a further expenditure of Rs. 8-5 lakhs will have to be incurred to effect the necessary improvements to the existing line between Mysore and Chamrajnagar.

#### Burma Railways

The annual report of the Burma Railways for the year ended March 31, 1934, shows that the railway is emerging from the trough of depression into which all railways had fallen during the past few years. The year 1932-33 was possibly the worst year of the period of depression and the gross earnings of the railway improved upon it by 19-04 lakhs in 1933-34. The increase was due solely to a larger movement of goods, the despatches of rice and paddy being comparatively heavy. Strict control over expenditure has enabled the administration to reduce working expenses by Rs. 39-75 lakhs in four years. There was, however, an increase of Rs. 8-09 lakhs in the working expenditure for 1933-34, but the operating ratio for the year was 76-67 against 78-55 in the previous year. Throughout the year, road motor competition continued keen and the administration expects that improved economic conditions will intensify such competition.

#### Ministry of Transport Proposed

The Associated Chambers of Commerce have addressed a letter to the constituent chambers embodying the considered views of the European group of members of the Central Legislatures on the proposals for planned economy. One such proposal deals with transport problems, and runs as follows: "That in the opinion of the Association it is essential in the interests of the co-ordination of transport throughout India, that early steps be taken to redistribute the portfolios of the Governor-General's Executive Council in order to provide for a Member for Communications whose portfolio should include Railways, Roads, Civil Aviation and Posts and Telegraphs, but should exclude Inland Water Transport and Coastal Shipping, which should be included in the portfolio of the Member for Commerce."

The following resolution referring to railway tariffs is also suggested: "That in the opinion of the Association the question of a thorough overhaul of railway tariffs, both for passengers and goods, with a view to their reconstruction on a scientific basis should be examined at the earliest possible date, and that, as soon as the necessary data have been collected, non-official representatives of trade and commerce should be associated with the Government of India in a full inquiry." In this connection, both Sir Joseph Bhore and Sir Guthrie Russell have very recently given the assurance that when concrete proposals

relating to the revision of the classification of goods are ready, the views of the various commercial interests will be invited and given full consideration before final conclusions are adopted.

### Scholarships for Railwaymen's Children

The Managing Committee of the G.I.P. Railway Staff Benefit Fund has decided to award seven scholarships, each valued at Rs. 25 per mensem, to assist sons of members of the fund in the prosecution of studies at a Government-recognised college or technical institution. Two scholarships will be awarded on the results of each of the following examinations: Matriculation examinations of the Bombay and Allahabad Universities and the Senior Cambridge examination. The seventh scholarship will be granted on the results of the Nagpur University Matriculation examination.

### Pilgrim and Excursion Trains

Of recent years many special pilgrim trains have been organised and run by private companies, and also by railways, with considerable success. Apart from the reduced railway fares offered on these trains, the supervision of the whole tour by the organisers is a special inducement for the ignorant villagers unaccustomed to travel. The special trains have limited accommodation and there is, consequently, no over-crowding. Another facility of no small importance is that there is no necessity for transshipment throughout the tour, unless there is a break of gauge.

An excursion of educative value, recently organised by the Bengal-Nagpur Railway to Tatanagar, attracted quite a good number of business men, educationists and students who were greatly interested in all they saw of the various manufacturing processes at the Tata Iron and Steel works and associated factories. The railway propose to get up another party to Tatanagar if a sufficient number of passengers is forthcoming.

## ERITREA

### Single-Expansion Mallet Locomotive

At the request of the Ministry of Colonies the Locomotive Engineering Department of the Italian State Railways has designed a new type of Mallet locomotive, in which all four cylinders take high-pressure steam directly from the boiler. For reasons of simplicity and the particular requirements of a colonial line, a single expansion engine is considered more suitable than the usual Mallet compound. Before the order for the construction of these engines was placed, practical tests were made with a flexible joint for the main steam admission pipe to the front cylinders. An outline drawing giving the leading dimensions is reproduced above.

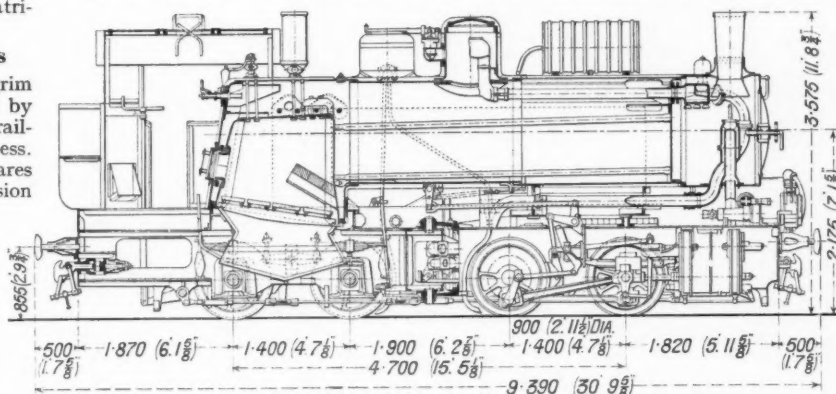
The main and truck frames are connected by two articulated pivots with a common vertical axis, and the play allowed enables 3-ch. curves to be negotiated. A single screw-reversing gear controls both sets of Walschaert motion, and the Hardy vacuum brake acts upon all wheels. The front engine steam pipe is jointed with two spherical flexible couplings, one fixed to the lower part of the boiler and the other to the front bogie. The steel ball joint is kept tight by a packing of graphited asbestos cord enclosed in a stuffing box, and is centered by means of a flange, which takes all thrust off the asbestos packing. There is also a telescopic tube inside a stuffing box with graphited asbestos packing, which allows of longitudinal expansion and contraction in the pipe. This simple type of packing is used in preference

steam and be fitted with multiple valve regulators in the superheater header, and all are to be supplied with speed indicators and recorders. Two engines—one each of the two types of valve gear—will be supplied with pyrometers for both superheater and smokebox.

## THE FAR EAST

### Hankow-Wuchang Bridge

In view of the pending completion of the Canton-Hankow Railway, a bridge over the Yangtze River between Wuchang and Hankow is recognised as a necessary corollary sooner or later. In spite of the greatness of the task involved its construction is reported will be undertaken jointly by the Ministry



Single expansion Mallet tank locomotive, Italian Colonial Railways in Eritrea

to packings of a very accurate fit, as the latter cannot so well be dealt with in a colonial repair shop.

## EGYPT

### The New Main Line Locomotives

Further details in regard to the twenty new mixed traffic locomotives for which tenders are being invited by the Egyptian State Railways are now available. [The first brief illustrated description appeared in our issue of November 2.—Ed., R.G.] Eighteen engines are to have Walschaert valve gear and piston valves, and the remainder are to be fitted with R.C. or Caprotti poppet valve gear. Two of the Walschaert valve locomotives are to have their connecting and coupling rods fitted for grease lubrication. This requirement is evidently in the nature of an experiment, as it is specified that both oil and grease lubricated engines shall be so arranged that either one or the other can be readily standardised over the complete twenty locomotives.

Another experimental feature being tried out on this new contract is the Kylchap blast pipe. Two of the Walschaert valve engines are to be fitted with this type blast pipe. All the locomotives will use superheated

of Railways and Hupeh Provincial Government. When this bridge is completed there will be through railway communication from Canton to Peiping right across China from south to north. As the Yangtze is navigable for ocean-going steamers up to Hankow, it is obvious that such a bridge, even above that city, will be one of the greatest in the East, if funds can be raised for its construction.

### New Railway Demanded

A movement is afoot urging the early linking up of the isolated Nanchang-Kiukiang Railway with the Hunan-Hupeh section of the Canton-Hankow Railway, by means of a branch leaving the latter at Yochow, and joining the former at Liusiang. This new line would serve Tungcheng en route.

### South Manchuria New Stock

During the current fiscal year the S.M.R. has purchased 88 new locomotives (including 12 of the 4-6-2 type now hauling the Asia), 187 coaches, and 440 goods wagons, and a sum of Y.8,000,000 has been budgeted for expenditure during the next fiscal year on 57 locomotives and diesel railcars, 27 coaches, and 220 goods wagons. A locomotive testing plant is to be laid down at Shakako at a cost of Y.500,000. The

total budget for the next fiscal year has been fixed by the directors at Y.40,000,000, compared with the departmental estimates of Y.69,000,000.

### Speeding up on the South Manchuria Railway

The Asia Express, the new streamlined train of the South Manchuria Railway [see THE RAILWAY GAZETTE, October 26.—ED.] is now in regular operation in each direction between Dairen and Hsinking. Leaving Dairen at 9.00 a.m. it reaches Mukden at 1.47 p.m. after a stop at Tashihchiao, and Hsinking at 5.30 p.m. after an intermediate stop at Ssupingkai. In the opposite direction, the train leaves Hsinking at 10.00 a.m., reaches Mukden at 1.38 p.m. and Dairen at 6.30 p.m., also making the same intermediate stops. Allowing 15 min. total stopping time, the average running speed over the 438 miles between the termini is 53.1 m.p.h. Supplements of six yen for first class, four yen for second class, and two yen for third class are charged for journeys over the full distance. The train consists of a streamlined 4-6-2 locomotive, and six streamlined vestibuled carriages, including dining and observation vehicles. The seats in all classes can be turned at a slight angle to the window to give a better view to the passengers. Although the schedule of the Asia Express is to be reduced as experience is gained, studies are being made of the operation of high speed diesel trains which will reduce the time between Dairen and Hsinking to six hours, or 72 m.p.h., and in a recent interview the Chief Mechanical Engineer of the South Manchuria Railway said: "We are now planning an express train faster than the Asia. In this progressing world, railway service must be constantly improved, and faster trains provided for the travelling public. When the Manchurian public demands a speedier train than our new express we will have it ready."

## SWITZERLAND

### Federal Railway Returns

The returns of the Federal Railways for October have shown even more plainly than during the last few months, the steady decline in receipts which first became apparent in July. Thus, the improvement to be observed in the first half of the year was only transitory. So, though total gross receipts for the first 10 months of the year were only one per cent. lower than in the corresponding period last year, receipts for October were down by 9.6 per cent. Decrease in coaching earnings is due not to fewer journeys made—for there were actually more in October than in October, 1933—but to the widespread issue of week-end tickets. During the ten-monthly period both journeys and passenger receipts fell by 1.8 per cent. Goods revenue

declined by 6.1 per cent. during October. But operating costs were reduced by 4.9 per cent. for October and by 4.4 per cent. over the January-October period as compared with 1933. Net revenue in October amounted to fr. 8,770,000 and in the ten months to fr. 80,886,525 or fr. 6,167,507 more than in 1933.

### Free Transport of Luggage on Swiss Railways

The Federal Railways having been authorised to introduce the free transport of luggage, not exceeding 30 kg. for every full-fare ticket, and 20 kg. for each half-fare ticket, the matter will be discussed by the Commercial Conference of Swiss Transport Undertakings and interested parties at their next meeting. It is anticipated that this new measure will become operative as from May 1, 1935, and will, presumably, affect registered luggage charges very materially.

## FRANCE

### Programme of Works

In accordance with the *Plan Marquet* for the relief of unemployment, the French railways are to carry out the following works in the near future:—

#### Electrification

**State Railways:**—The Paris (Montparnasse)-Versailles (Chantiers)-Chatres-Le Mans section, 211 km., is to be electrified between 1935 and the beginning of 1937. Orders have already been placed for 28 2.D.2. electric locomotives, and for the construction of substations and other works.

Particulars of this scheme have already been given in THE RAILWAY GAZETTE for July 27 and the *Electric Railway Traction Supplement* for August 24.

**P.O.-Midi:**—Following the completion of the electrification of the Vierzon-Brive section of the Paris-Toulouse line in 1935, the Tours-Bordeaux line is to be electrified.

**P.L.M.:**—The Modane-Chambéry electrified section of the Mt. Cenis line is to be extended northwards to Culoz; actually work has been carried out spasmodically on this division for over two years.

**Eastern:**—The Paris suburban lines are to be electrified, including Paris (Est)-Meaux, with a short branch to Gargan; Paris (Est)-Gretz and the Nogent-Champigny branch; and Paris (Bastille)-Boissy St. Leger.

#### Engineering Works

**State Railways:**—The quadrupling of the section between Clarmart (6 km. from Paris) and Versailles (Chantiers), on the Montparnasse-Le Mans line, is to be undertaken. Rennes station is to be remodelled.

**P.L.M.:**—The following sections of the Paris-Dijon line are to be quadrupled

seriatim, Villeneuve la Guyard-Sens, Laumes Alesia-Blaisy-Bas, &c.

**Eastern:**—Rheims and Nancy stations are to be remodelled.

### Signalling

A start is to be made at the beginning of next year with the introduction on all systems of the new code of signalling recommended by the committee presided over by M. Verlaut. The work is to be finished by the middle of 1936. It involves changes from green to yellow for "caution" and white to green for "proceed." Some 4,500 km. of main lines, on all systems, are to be equipped with automatic colour light signals.

### Court Proceedings Resulting from the Lagny Accident

The charges arising out of the accident at Lagny on December 24, 1933, when 200 passengers lost their lives, will come up for hearing before the court at Meaux, probably on December 19, and are expected to last three days.

### Curtailment of 1935 Estimates

At a recent meeting of the Conseil Supérieur des Chemins de Fer, the capital expenditure proposals of the principal railway systems for 1935 were considered. Severe cuts were made in the original estimates, which were thus brought down to 1,699,500,000 fr., or £21,243,750 at 80 fr. to the £. In arriving at this figure, due account was taken of necessary expenditure, safety works and electrification of lines now in progress under the national equipment programme. But in order to maintain constant progress in modernising operating conditions, especially in regard to rolling stock, the council approved the acquisition of new all-metal coaches and 230 new railcars.

### State Railways Traffic Reorganisation in the Paris Area

There has been considerable delay in connection with the plans to transfer most of the main line traffic from the St. Lazare station to the Montparnasse terminal of the State Railways. In order to abolish the ugly railway bridge over the Avenue du Maine, the Montparnasse station will be set back to the other side of the avenue. The plans also include the abolition of level crossings in the Paris district on the Argenteuil and Havre lines and also on the line from Montparnasse to Versailles. The latter line will be quadrupled and also the line between Bois-Colombes and the Stade station. Some of this work is already in progress. The city of Paris has agreed to provide 540,000,000 fr. towards the cost of these undertakings. It has just authorised the raising of a first loan of 130,000,000 fr., guaranteed by special local taxes, and is also contributing 10,000,000 fr. from the city budget.



## IMPRESSIONS OF OVERSEAS TRANSPORT

### III—American experiments in high-speed railway transport have aroused intense public interest in the streamlined units here described

By A. W. ARTHURTON, formerly Secretary, Railway Press Bureau

AMERICA is much concerned with streamlined trains. Speed to-day is more than ever at a premium. For the first time for nearly a century the steam locomotive is facing real competition on the rail in the shape of the diesel power unit. American railroad executives have been encouraging diesel engine development for some years past with the view of obtaining something faster, more efficient and more economical than steam locomotives. There are now in the United States, in use or on order, approximately 150 diesel power units as well as nearly 1,000 railcars. All the railways are adjusting their plans to what may perhaps be the greatest period of change in the history of railway transport, and the Burlington and Union Pacific companies have sponsored the building of new lightweight streamlined trains, the performances of which are being watched closely by the executives of other railways.

The Baltimore & Ohio, on the other hand, according to the President, Mr. Daniel Willard, has planned two six-car, fully air-conditioned streamlined trains, one of strong alloy-aluminium construction and the other of a new alloy steel, which has such strength as to permit a great saving in weight. These trains, of which comparative tests are to be made, actually weigh less than half the ordinary trains of similar size now in use, although the cars are larger in cubic space. One train will be hauled by a diesel locomotive, the other by a steam locomotive,\* the *Dolly Varden*. The diesel engine will be of two separate units of 1,800 h.p. each, with central control. *Dolly Varden*, about 20 years old, but rebuilt and equipped with a water-tube boiler generating a steam pressure of 350 lb., is a 4-4-4 type with 7-ft. driving wheels, and is streamlined. It is designed for a normal speed of 100 m.p.h.

At the end of October thousands of people filed through the Pennsylvania stations in New York and Philadelphia to view the second of the Union Pacific company's streamlined trains after its record exhibition run from Los Angeles to New York, via Chicago, particulars of which were given in your *Diesel Railway Traction Supplement* of November 2. This demonstration of the impending practicability of running between Chicago and the Pacific coast in a day and two nights has caused widespread interest in American railway circles.

The Union Pacific company's second streamlined train was delivered in September last, and I happened to be passing through the Pennsylvania station in New York when I noticed a steady stream of people, four abreast, crossing the concourse and entering one of the platforms, or tracks as they are called. Upon enquiry, I ascertained that the procession had been in progress for several hours and all the previous day. To have joined the queue would have meant several hours of waiting, but, upon making myself known to the officials in charge, I was courteously allowed to pass the gate at once. The streamlined monster—for prehistoric monster it appeared to be on approaching it from the front—with its projecting visor and dual fog penetrating headlights resembled a Central London tube train in the open. To the accompaniment of the "Step lively, folks, step lively" of the coloured

car conductors, the crowd passed through the train, their progress being hastened by the announcement from time to time that a souvenir awaited them at the end of their inspection. This consisted of a medallion, bearing on one side the inscription "A sample of the aluminium in the new Union Pacific train built by the Pullman Car & Manufacturing Corporation," and on the reverse side a reproduction of the train with the words "Union Pacific 1934. Lucky Piece." A pamphlet describing the train was also given.

With windows and doors flush with the sides, car connections snug and every detail lined to give the minimum of wind resistance, and with tubular car construction, the entire train is so arranged that it gracefully tapers down to a fin-like tail. The interior decorations emphasise the streamlining to a considerable extent, and hardly a single feature is left to remind the traveller of ordinary trains and accommodation. Gone are the traditional green curtains and the short squeeze-in berth. Instead there are semi-circular brown curtains and extra long berths to accommodate tall passengers. There are even arrangements for passengers to dress without sticking their feet out into the aisle. All is privacy, even to the individual reading lamps and private washbowls.

It is stated in the New York papers that seven more streamlined trains will be operating next spring. Public Works Loans totalling \$2,270,000 for streamlined high-speed passenger trains were announced to go to five railroads. These trains are to be driven by diesel-electric power, but a loan of \$900,000 will be made to the Baltimore & Ohio to afford a chance of comparing the merits of steam and diesel power with electric transmission by the experiments already referred to. Other loans will go to the Gulf Mobile and Northern Company, \$350,000, New Haven, \$300,000, Boston & Maine, \$220,000, and Illinois Central, \$500,000.

#### Fuel Economy on the American Railways

That economy and efficiency are far from incompatible has been shown many times by the railways in the course of the depression. In America, where rail transport has made strenuous efforts to set its own house in order in its own way, in spite of economic cyclones all about it and well-intentioned intervention with its affairs, a notable saving in fuel consumption has been announced by Mr. M. J. Gormley, President of the American Railway Association, in a statement before the Interstate Commerce Commission. In 1920, the coal consumption for each 1,000 gross ton miles of freight was 197 lb., but in 1933 this was brought down to 140 lb., after a decline which has been almost continuously maintained since 1922. The 57 lb. saved for every 1,000 gross ton miles amounted to more than 19,500,000 tons in the course of the year, or a reduction of 28.9 per cent. in the amount of fuel consumed. The financial saving so effected, with the 1933 price of coal at \$1.96 a ton was \$38,285,000. In passenger service during 1933, the unit consumption of fuel fell by 4,345,000 tons from the 1920 figure, involving \$8,515,000 less outlay. The reduction compared with 1920 was in this case 19.1 per cent. Altogether, \$46,800,000 less was spent on passenger and freight fuel last year as compared with 1920.

\* Illustrated on page 904 of our issue of November 30.

## SHEFFIELD DOUBLE-FRAME WELDED BOGIE

*This type of bogie combines remarkable rigidity in a balanced structure with abnormal lightness. Other special features are rapidity of spring withdrawal and the carriage of all bolster loading upon hemispherically centred side bearers*

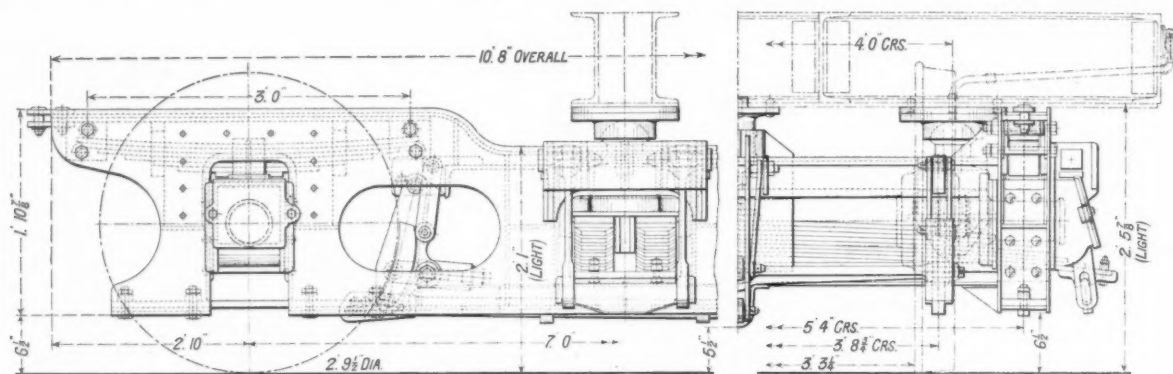
ON pages 763-4 of THE RAILWAY GAZETTE of November 9 last, there was illustrated and briefly described the Sheffield welded bogie, as fitted to one of the new steel passenger coaches recently supplied to the Nigerian Railway. We now describe this type of bogie in detail and reproduce drawings of it.

The object of the design is to provide a structure of considerable transverse stability, and to effect this, the width of the upper and lower transverse ribs are proportioned to provide, for a given bending moment, a modulus of section three times greater than that which obtains with the usual top and bottom flanges of single plate

outside end bottom safety bolt and lifting the end of the spring—by means of a hook or bar fitted into a hole in the end spring plate—clear of the spring buckle check on the axlebox, thus enabling the spring to be run out. Withdrawal and replacement can, in fact, be completed in two minutes.

### Bolster Spring Suspension

The bolster spring suspension is of the Sheffield Twin-borrow type. It consists of two volute springs at each end of the bolster, resting in spring boxes guided by horn cheeks attached to the swing bolster. These transmit



Half side and half end elevations of the Sheffield welded bogie

frames and customary single angles. Yet there is withal a reduction in weight of no less than 20 per cent.

### A Rigid and Balanced Structure

The vertical frame plates are suitably reinforced, against shear by internal ribs welded into them before the upper and lower transverse cover plates are finally welded into the structure, thus providing a modified form of box girder. This enables the axlebox springs to be located within the side frames, and the load upon the springs to be aligned through the centre line of the journals, thus producing a balanced structure under load. The openings surrounding the axleboxes are reinforced by internal stiffener plates, fillet and spot welded, to take shear due to load, and reactions due to brake pressure. The bottoms of the frames at the axlebox openings are stiffened by means of fitted sectional bars of considerable length which are bolted into the bottom webs of the frame on each side of the opening and can be withdrawn when the bogie is unweheded.

The ends of the laminated springs over the axleboxes bear against the underside of anti-friction rollers, the rollers in their turn bearing against distance pieces which reinforce the frame at points of contact of the load. As there are no auxiliary springs or gear attached to the axlebox springs, their withdrawal and replacement are very simply and quickly effected by jacking up the bogie frame, relieving the compression on the springs, taking out the

the load through rounded knife edges on to two laminated springs, loaded at two predetermined points, upon which depend flexibility and stress. This combination of springs is aperiodic in its function. The ends of the laminated bolster springs are suspended from welded boxes attached to the outside of the frame by means of two links carrying a spring beam upon which the springs rest. This spring gear was described on page 212 of THE RAILWAY GAZETTE of February 9, 1934.

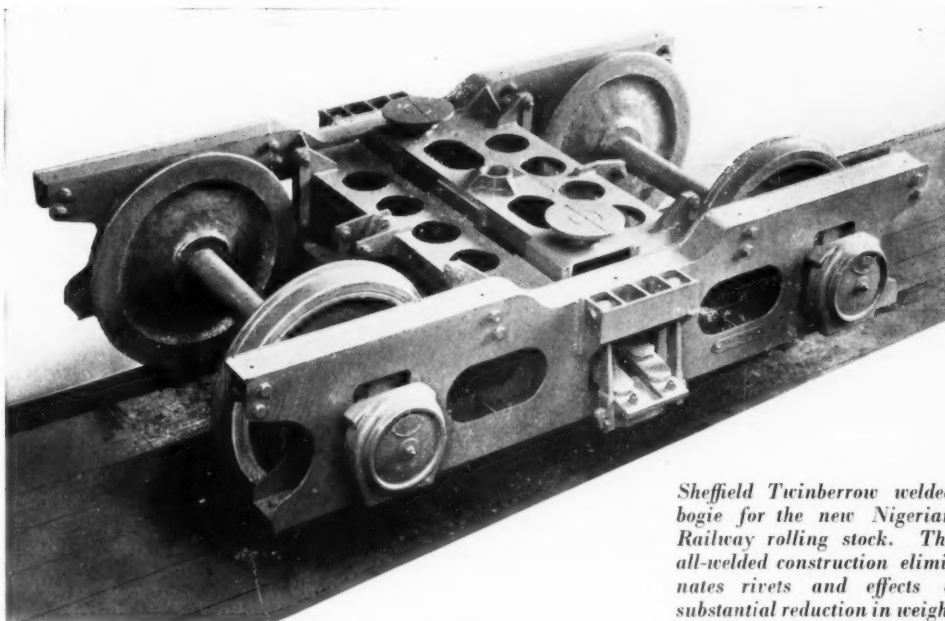
The fixed bolsters at each side of the swing bolsters are welded into the double side frames and further reinforced by deep gusset plates framing up the whole of the cross angle stretchers, and thus triangulating the structure from side to side. The guide rubbing pieces on all the bolsters are welded into position. The axlebox guides are provided with renewable slippers 6 3/4 in. wide by 10 in. in depth, giving a large bearing area.

To the main bolster of the vehicle there are attached two circular plates superimposed upon the side bearers of the bogies. These bearers consist of circular shapes resting upon hemispherical centres and permitting transverse and longitudinal tilting of the bolster. No weight is carried upon the centre pin, which is free to adjust itself to angular movement in either direction. The purpose of the side bearer is to eliminate hunting and incidentally to reduce the bending moment on the main bolster by 40 per cent.

The design of the frame may be varied to suit several

forms of spring suspension, and headstocks may be provided to accommodate clasp brakes and gear. With modifications, it is, owing to the rigidity of the frame, peculiarly suitable for bogies used in electric traction.

The weight of the frame of the particular bogie for the Nigerian Railway, including all welded fixtures, pins and rollers, without loose bolster, is 19½ cwt. It should be noted that the bogie side frame is to the patent of Mr. G. H. Sheffield, and G. H. Sheffield & Co. (Engineers) Ltd., No. 403906.



*Sheffield Twinberrow welded bogie for the new Nigerian Railway rolling stock. The all-welded construction eliminates rivets and effects a substantial reduction in weight*

## NEW PASSENGER ROLLING STOCK FOR SOUTH AFRICA

*Twenty first-class day and sleeping coaches were comprised in an order recently executed by the Birmingham Railway Carriage & Wagon Co. Ltd.*

AS announced on page 910 of last week's issue the Birmingham Railway Carriage & Wagon Co. Ltd., recently shipped to South Africa twenty first-class day and sleeping coaches ordered by the South African Railways and Harbours Administration. It was not until August 23 that the Birmingham company received all the necessary information to put the work in hand. The contract date for final shipment was December 13, but the first five of the vehicles were completed on November 5 and the final batch was passed for shipment on November 27, so that the whole of the coaches will be in traffic in South Africa by Christmas. The contract was obtained in the face of severe competition both at home and abroad.

Each coach is divided into five four-berth compartments, and three two-berth compartments, with a lavatory at each end. There is seating accommodation for 39 passengers when the coach is used as a day saloon, and sleeping accommodation for 26 passengers. Each compartment is fitted with a combined folding wash basin and table. The upholstery is green buffalo hide, and the metallic fittings are finished chromium plated. The interior framework is of teak with oak panels, the lower panels being covered in green Rexine cloth. The floors are covered with brown lino and loose mats. Each compartment has one three-way electric light fitting, of which the centre group is green, and one two-way fitting, together with separate corner berth lights, and the coaches are fitted throughout with steam radiators under the control of the passenger.

The inspection of the coaches was carried out under the supervision of the Advisory Engineer to the High Commissioner for the Union of South Africa.

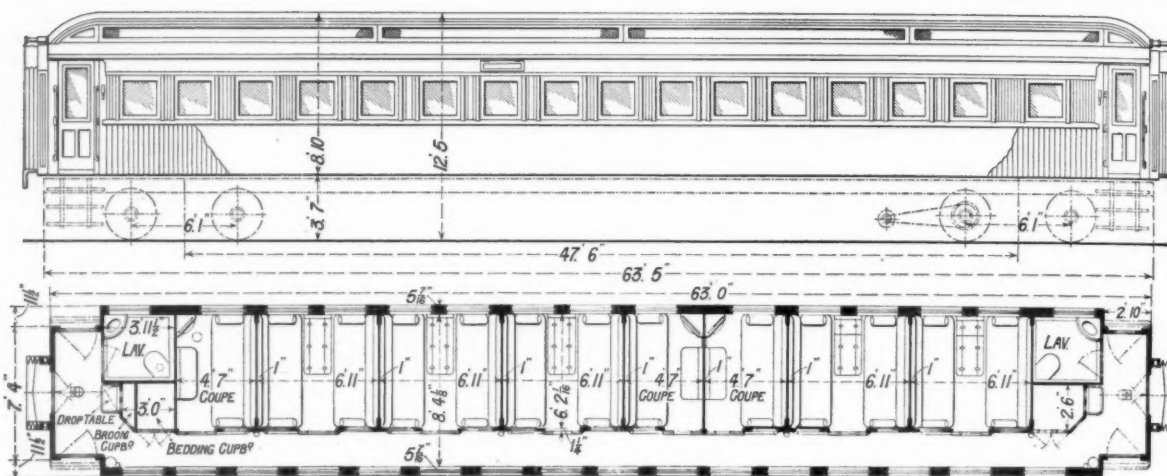
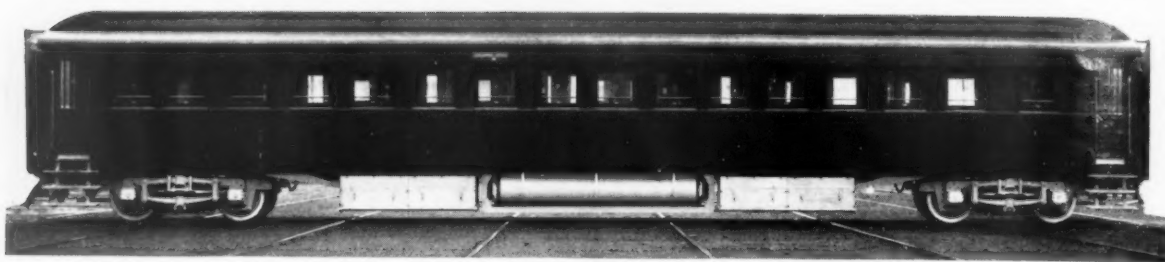
The principal sub-contractors to the Birmingham Railway Carriage & Wagon Co. Ltd. were:—for electric

lighting equipment, J. Stone & Co. Ltd.; metallic fittings and folding wash basins, James Beresford & Co. Ltd.; vacuum brake equipment, the Vacuum Brake Co. Ltd.;



*An interior view of one of the two-berth day and sleeping compartments in the new Birmingham Railway Carriage & Wagon Company stock for South Africa*





Side elevation and plan showing exterior appearance and internal arrangements of the new first-class day and sleeping cars for the South African Railways

buffing and drawgear springs, also india-rubber flooring, George Spencer Moulton & Co. Ltd.; steam heating apparatus, blinds and vestibule diaphragms, the Laycock Engineering Co. Ltd.; millboard panels, G. D. Peters & Co. Ltd.; steel springs, Wilford & Co. Ltd.; automatic couplers, English Steel Corporation Limited; Beclawat window panels and sliding door details, Beckett, Laycock

& Watkinson Ltd.; plywood panels, the Aeronautical & Panel Plywood Co. Ltd.; galvanised tanks and other fittings, John Levick Limited; buffalo hides, Connolly Bros. Limited.

The solid type wheels and the axles were supplied by Steel, Peech & Tozer Ltd.; these components were assembled at the builder's works.

### R.A.S. Flight with Royal Wedding Photographs



Among many feats of newspaper organisation accomplished in connection with the Royal Wedding was that achieved by Railway Air Services Limited on behalf of the "Belfast Evening Telegraph." Photographs of the wedding were rushed by road to Croydon Airport, arriving there at 12.10 p.m. One minute later the specially chartered R.A.S. machine, piloted by Capt. Beresford, took off, and it landed at Belfast ( Newtownards ) at 3.25 p.m., enabling an edition containing photographs of the wedding to appear the same afternoon. We reproduce alongside an official photograph of the plane taking off from Croydon for Belfast

## THE ROYAL HONEYMOON DEPARTURE FROM PADDINGTON, G.W.R.

(See also illustrations on page 946)

**A**FTER the pomp and circumstance of their state drives through Westminster to and from the Abbey, the Duke and Duchess of Kent arrived at Paddington station, G.W.R., on the evening of the wedding day, November 29, to steal away in the evening gloom from the rejoicing metropolis to spend their honeymoon at Himley Hall, in the heart of Shakespeare's romantic forest of Arden, near Birmingham.

At Paddington the royal couple received as wonderful a welcome as they had been given at any time throughout the day. They were officially welcomed at the departure approach road entrance to the royal waiting rooms by Sir Robert Horne, Chairman, G.W.R.; Viscountess Churchill with the Hon. Sarah Spencer, her daughter; Lord Palmer, Deputy Chairman, G.W.R., and Lady Palmer; Lord Mildmay of Flete, Director, G.W.R.; and Sir James Milne, General Manager, G.W.R., and Lady Milne. A simple but most effective decoration had been arranged around the waiting room entrance, and over the doorway was a beautiful reproduction of the coat-of-arms of the Duke and Duchess of Kent, details of which had been specially provided by the Garter King at Arms. The waiting room interior and No. 1 departure platform had also been most pleasingly decorated with palms and flowers, while the platform entrance was surmounted with a floral horseshoe. The whole scene, brilliant in itself, was made even more brilliant by the battery of arc lights which flooded the platforms for the benefit of camera men.

Before the departure of the royal train, a description of which was given in our issue of last week, the Hon. Sarah Spencer, the little daughter of Lady Churchill, and of the late Viscount Churchill, Chairman of the G.W.R. until his death last January, presented the Duchess of Kent with a magnificent bouquet of flowers.

There was a large gathering of friends, G.W.R. directors, chief officers, and their ladies, to witness the actual departure of the royal train from No. 1 platform. In addition a huge crowd had assembled at No. 2 platform in order to get a glimpse of the royal couple. The train was in charge of Mr. H. L. Wilkinson, Superintendent of the Line, and on the footplate were Driver J. Duffin, Fireman J. Williams, both of Old Oak Common, and Inspector Sheldon, of Swindon. The guard was E. Hurley, of Paddington.

### The Journey as described by "The Times" Correspondent

Among those travelling on the train, which left Paddington at 4.35 p.m.—a quarter of an hour late—was a correspondent of *The Times* who wrote of the journey:—

"Paddington and Birmingham are 110 miles apart, but there was a greeting for the Duke and Duchess at some point of every mile along the route as the 'honeymoon train' raced through outer London and five English counties in the darkness of a November evening on the first stage of the journey to Himley.

"Until the train had cleared the 1,100 ft. long passenger and parcel platform of the Great Western terminus the Duke of Kent, with the Duchess beside him, stood at the window of their saloon and waved to enthusiastic lines of the public and railway workers. They then withdrew to a coupé festooned with yellow roses and with a golden horseshoe hanging on the wall. For the first time during the day

they were shut off from ceremony and were really alone, but the sound of cheering for some time was parallel with the train as it gathered speed.

"As the train ran into Buckinghamshire the intervals of blank darkness became longer, but with every flash of light that marked a station or a village road a cheer reached the Royal travellers. . . . Near Aynho Junction the people used fireworks to convey their good wishes, and twinkling



Photo by]

[Wolverhampton Express and Star

Interior of the royal coach decorated by Mr. Fabian Trollope, of Trollope & Sons, for the honeymoon journey from Paddington to Birmingham

cascades of stars and green flares broke the gloom of the misty night. . . . At Leamington there was a better chance of estimating the fullness of the enthusiasm, as the train again slowed down. Crowds were grouped in every street crossed by the line, and at least 3,000 people, including many children, must have been massed on the down platform.

"The first greetings of Birmingham, reached at 6.30 p.m., were heard from outlying stations. The train ran into Snow Hill only 10 minutes late, six of the minutes lost by delay at Paddington having been recovered. The arrival platform was gaily decorated with flags and pennants, and when the Duke and Duchess stepped from the saloon they were welcomed by the Lord Mayor, the Lady Mayoress, the Town Clerk, and Chief Constable. A number of former Lord Mayors who are still members of the City Council, and a gathering of servants of the Great Western Railway were on the platform. . . . The reception occupied only a few minutes, and when a photograph had been taken their Royal Highnesses walked up the steps, lined with chrysanthemums, palms, and foliage plants leading to the front of the station to continue their journey by road. . . .

"For the journey the saloon coach, *King George*, had been turned into a floral bower. The lamps on the tables were surrounded by roses, and the luggage racks were banked with golden and copper-coloured chrysanthemums. Four golden horseshoes, in addition to the one in the coupé, were hung around the sides of the coach. Soon after passing through Banbury the Duke and Duchess took tea in the saloon. . . .

The decoration of the saloon coach in which the Duke and Duchess travelled was arranged to the instructions of Mr. Fabian Trollope, of Trollope & Sons, the well known decorators, while William Whiteley Limited was responsible for the decoration of the platform and royal waiting rooms.





## AN INTERESTING LOCOMOTIVE CONVERSION

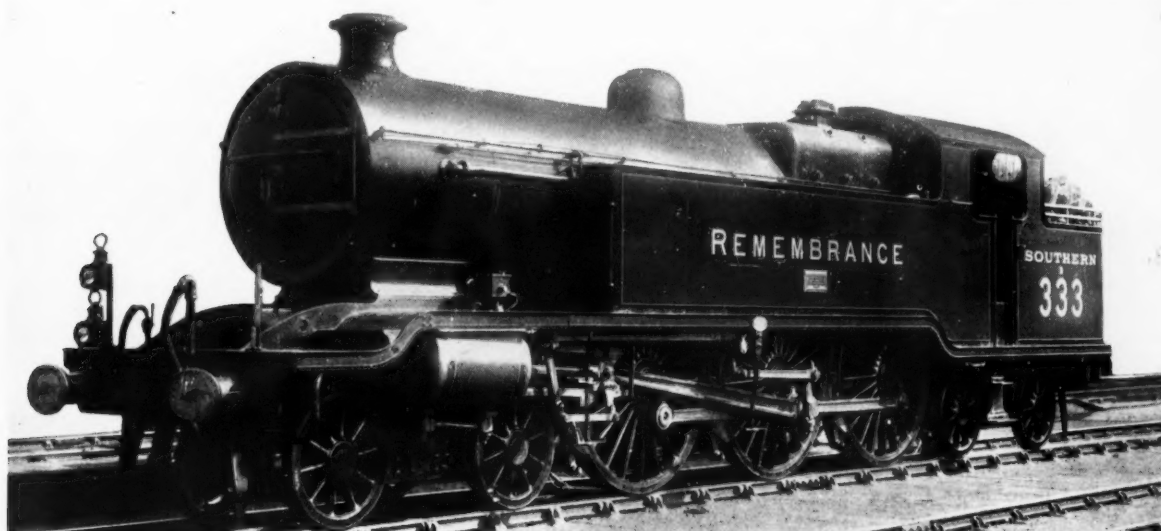
*Southern Railway Baltic tank engines rebuilt as 4-6-0 type engines with tenders*

THE seven well known express passenger tank engines of the 4-6-4 or Baltic type originally designed for the former London Brighton & South Coast Railway by Mr. L. B. Billinton, and built at that company's Brighton works between the years 1914 and 1922, are being converted into 4-6-0 type tender engines at Eastleigh works, the first to be completed being No. 2329 *Stephenson*.

The rebuilding of the engines, raising of the boiler pressure to 180 lb. per sq. in. and provision of a 5,000 gallon

Other alterations include substitution of vacuum for Westinghouse brake, Ross pop safety valves for those of the Ramsbottom type, and the fitting of a Davies & Metcalfe exhaust steam injector in place of the Weir feed pump.

Two of the engines bore names, Nos. 2329 *Stephenson* and 2333 *Remembrance*; the others are being named after locomotive engineers of the past, and the class will be known as the "Remembrance" class. The numbers and



"Remembrance"—so named in memory of the L.B.S.C.R. employees who fell during the war—one of the Baltic tank engines prior to conversion

standard double-bogie tender makes them of general utility and brings them closely into line with the existing 4-6-0 "King Arthur" class engines, as shown below:—

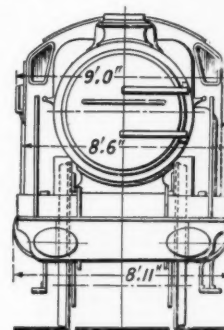
Engine	Cylinders	Coupled Wheels	Boiler Pressure	Heating Surface (Evaporative)	Grate Area	Adhesive Weight	Tractive Effort 85% b.p.
	inches	diameter	lb.	sq. ft.	sq. ft.	t. c.	lb.
Rebuilt Baltic "King Arthur"	22 x 28	6 ft. 9 in.	180	1,816	26.7	55 9	25,600
	20½ x 28	6 ft. 7 in.	200	1,878	30.0	60 0	25,321

The alterations include the removal of the trailing bogie, coal bunker and water tanks, the shortening of the main frames, &c., and the provision of a new cab with side windows, which, together with a shorter chimney, brings the rebuilt engines within the loading gauge of the Southern Railway generally and permits of their use on any of the main lines other than the Tonbridge to Hastings section. As originally built, the engines conformed to the loading gauge of the former London Brighton & South Coast Railway, which was larger than those of the other constituents of the Southern, and consequently their use has hitherto been confined to the Brighton section. As a result of the electrification of the London to Brighton line, and the forthcoming extension of the electric services to the Eastbourne and Hastings line, no suitable work remained for them on that section or elsewhere, in view of their limited coal and water capacity.

names allocated are as follow: No. 2327 *Trevithick*, 2328 *Hackworth*, 2329 *Stephenson*, 2330 *Cudworth*, 2331 *Beattie*, 2332 *Stroudley*, 2333 *Remembrance*.

Additional dimensions are as follow:—

Wheels, bogie, diam.	3 ft. 6 in.
Wheelbase, coupled	14 ft. 9 in.
Wheelbase, engine, total	27 ft. 4½ in.
Boiler, heating surface, small tubes (2 in. and 2½ in. outside diam.)	1,211 sq. ft.
Large flue tubes (5½ in. diam. outside)	453 sq. ft.
Firebox	152 sq. ft.
Total heating surface (evaporative)	1,816 sq. ft.
Superheater elements	383 sq. ft.
Combined total	2,199 sq. ft.
Working pressure	180 lb. per sq. in.
Grate area	26.68 sq. ft.
Weight on coupled wheels	55 tons 9 cwt.
Weight of engine in working order	73 tons 9 cwt.
Weight of engine and tender in working order	130 tons 13 cwt.



The tender, as the illustrations show, is of the eight-wheeled double-bogie pattern, having a water capacity of 5,000 gallons and a coal capacity of 5 tons. The engine at 85 per cent. of the boiler pressure develops a tractive force of 25,600 lb. We refer to this interesting conversion in an editorial note on page 931.



[Photo.]

[The Times]

*A group at Paddington before the Duke and Duchess of Kent departed for their honeymoon. With them are (from left to right) Lady Churchill, Sir Robert Horne (Chairman, G.W.R.), and Mr. H. L. Wilkinson (Superintendent of the Line, G.W.R.)*



[Photo.]

[Larkin Bros.]

*The entrance to the royal waiting room at Paddington station decorated for the reception of the Duke and Duchess of Kent when they arrived for their honeymoon journey. (See article on page 943)*

## RAILWAY NEWS SECTION

### PERSONAL

We regret to record the death, on December 2, after a short illness, of Mr. R. H. K. Blackwell, District Goods Manager, Newport, G.W.R. Mr. Blackwell began his railway career at Swansea 37 years ago and came to the Chief Goods Manager's office, Paddington, in 1902. Subsequently he held goods agencies at Devonport, Neath and Port Talbot before returning to headquarters as Chief Staff Clerk to the Chief Goods Manager. In 1926 he was appointed Assistant District Goods Manager in the Cardiff Valley Area, afterwards occupying a similar post in the Cardiff General District. In January, 1932, he was promoted to

Manager's office. After obtaining a knowledge of the various sections in that department, he was appointed Assistant Rates Clerk in 1891. In

the Traffic Manager, the position he now vacates.

Mr. W. M. Perts, who, as announced in our issue of November 30, has been appointed Deputy Commercial Assistant to the Traffic Manager, Southern Railway, entered the service of the London Chatham & Dover Railway in 1891. In 1911 he was appointed Assistant to the Parcels Manager of the South Eastern & Chatham Railway, and was placed in charge of the work of the department in 1921, under Mr. E. C. Cox. In the organisation of the Southern Railway in 1923, Mr. Perts was appointed Deputy Assistant for Rates and Charges to the Indoor Commercial Manager. In 1930 he became Assistant



[Chapman]

[Swansea]

**The late Mr. R. H. K. Blackwell,**

District Goods Manager, Newport, G.W.R.  
1933-34

be District Goods Manager, Gloucester, and in 1933 went to Newport in the same capacity. During the war he served in the R.O.D. His untimely passing has robbed the Great Western Railway of an able officer, and they who were privileged to know Mr. Blackwell personally will share in the very real regret that is felt by his colleagues and by those who served under him. The funeral service at Newport, and the interment at Harbury, Warwickshire, on December 5, were attended by large numbers of railway officials and friends.

Mr. A. H. Lingard, who, as announced in THE RAILWAY GAZETTE of November 30, has been appointed Commercial Assistant to the Traffic Manager, Southern Railway, entered the service of the London Chatham & Dover Company in 1887, in the Goods



**Mr. A. H. Lingard,**

Appointed Commercial Assistant to the Traffic Manager, Southern Railway

April, 1911, Mr. Lingard was appointed Chief Rates Clerk of the South Eastern & Chatham Railway, and Assistant to the Goods Manager in September, 1920. In 1923 he was appointed Assistant for Rates and Fares to the Indoor Com-



**Mr. W. M. Perts, M.Inst.T.,**

Appointed Deputy Commercial Assistant to the Traffic Manager, Southern Railway

mercial Manager, Southern Railway, becoming General Assistant in 1927. It was in 1930 that he was promoted to be Deputy Commercial Assistant to



**Mr. A. E. Hammett, M.Inst.T.,**

Appointed Assistant for Rates and Fares to the Traffic Manager, Southern Railway

for Rates and Fares to the Traffic Manager, the position he now relinquishes to become Deputy Commercial Assistant. He is a member of the Institute of Transport.

Mr. A. E. Hammett, who, as announced last week, has been appointed Assistant for Rates and Fares to the Traffic Manager, Southern Railway, began his railway career with the former London & South Western Railway at the Borough depot, London, in 1905. He was transferred to the Claims office of the Goods Manager's Department in 1913, was promoted to District Representative in 1917, and in July, 1919, was appointed Outdoor General Assistant. Two years later he was made Chief Cartage Assistant to the Outdoor Goods Manager, and early in 1930 was appointed Deputy Assistant for Road



December 7, 1934



Three generations of locomotive history side by side near Wood Green, L.N.E.R. On the left is 2-8-2 No. 2002, "Earl Marischal," with a Pacific and an Atlantic alongside, "Cock o' the North," the first of the 2-8-2 series, was sent by train ferry from Harwich to Calais on December 5 for tests at Vitry



Above: L.N.E.R. Pacific No. 4472, "Flying Scotsman," leaving Leeds on the return journey to King's Cross with the special high-speed test train, on November 30. Below: Mr. H. N. Cresley (Chief Mechanical Engineer, L.N.E.R.) congratulates Driver W. Sparshatt and Fireman R. Webster on the conclusion of the trial. Times and speeds of both runs are given in our article on page 951

Transport to the Superintendent of Operation, Southern Railway. In 1931 he was promoted to be Assistant for Road Transport, from which position he is now transferred to that of Assistant for Rates and Fares under the Traffic Manager. He is a member of the Council of the Institute of Transport.

Sir Ralph L. Wedgwood, C.B., C.M.G., Chief General Manager of the London & North Eastern Railway, has been appointed Chairman of the General Managers' Conference at the Railway Clearing House for the year 1935.

Mr. R. E. L. Maunsell, Chief Mechanical Engineer, Southern Railway, has been unanimously elected Chairman of the Chief Mechanical Engineers' Committee of the Railway Clearing House for 1935.

Sir Alexander Kaye Butterworth, who was General Manager of the former North Eastern Railway from 1906 to 1921, attained his 80th birthday on Tuesday last, December 4, and was the recipient of many congratulatory messages from his former colleagues.

It is with regret that we announce the death on November 30, at the age of 85, of Sir Robert William Perks, 1st Bt. Born at Kensington on April 24, 1849, the son of the Rev. G. T. Perks, he was educated at New Kingswood School, Bath, and King's College, London. He qualified as a solicitor and in 1876 joined with the late Sir Henry Fowler (Lord Wolverhampton) in establishing the firm of Fowler, Perks & Company which acquired a large Parliamentary practice. At different times he was connected with the Legal Department of the Metropolitan Railway, was solicitor to two railway undertakings in Lancashire, and was one of the original directors of the Lancashire, Derbyshire & East Coast Railway, remaining on the board of that company until its absorption into the Great Central Railway in 1907. On the retirement towards the end of 1901 of the late Mr. James Staats Forbes from the Chairmanship of the Metropolitan District Railway, Mr. Perks was elected a Director and Chairman of that company. With the late Mr. Charles T. Yerkes, he was responsible for carrying out the electrification of the District Railway, the first electric service on which was started, as between Ealing and Whitechapel, on July 1, 1905. For a short time until his death on December 29, 1905, Mr. Yerkes became Chairman, and Mr. Perks then took office as Deputy Chairman, occupying that position until his retirement from the Board in 1907. He was created a baronet in 1908. Since 1907, Sir Robert Perks has not held office in any British railway company, but as a large shareholder he was frequently present at annual meetings of the

South Eastern (later Southern) Railway and the District Railway, where he was always heard with attention. Sir Robert Perks was associated at different times with important railway construction and other works. With the late Mr. T. A. Walker, he was concerned in building Barry Docks, Preston Docks, the Manchester Ship Canal, and part of the Inner Circle Railway; and with Mr. C. Walker, the Rio Janeiro Quays and Harbour Works, the Buenos Aires Port Extension, and the Transandine Railway. He retired from the firm of Walker & Company in 1912. Sir Robert Perks was a J.P. for Oxfordshire and Kent, and a Fellow of the University of London.

The funeral service was held at the Methodist Central Hall, Westminster, on December 4. Amongst the large congregation present were Lord Ashfield, Chairman, and Mr. E. Rawdon Smith, Assistant Secretary, London Passenger Transport Board; Mr. Charles Sheath, Director, and Mr. F. H. Willis, Secretary, Southern Railway; Mr. John C. Mitchell, and Sir Lynden Macassey.

Mr. John Wardle is retiring from his association with the London Passenger Transport Board at the end of the year after 43 years' varied transport experience. He was for 20 years Commercial Manager of the Metropolitan Railway up to the time of its recent inclusion in the London Transport amalgamation.

Mr. A. W. Swan, B.A.Sc., has been appointed Manager of the Publicity and Sales Promotion Department of the United Steel Companies Limited, Sheffield, as from December 1, in succession to Mr. F. Rawlinson, who is leaving the post he has occupied with conspicuous success, to join Rawlinson-Broughton, Advertising Agents, Manchester. The latter firm will be advertising agents for the United Steel Companies Limited.

The directors of Thos. Firth & John Brown Limited have appointed Messrs. William Walker, John Smith, G. E. Wolstenholme and C. S. Dickie to be Local Directors of the company. Mr. Walker, like Mr. Smith, is Commercial Manager of certain sales sections of the business, the nucleus of his work being in connection with railway material, such as axles, springs, buffers, spring steel and road vehicle springs. He started with John Brown & Co. Ltd., in 1899 and from 1908-18 was in the London office of that firm. Mr. Wolstenholme is the senior Outdoor Sales Representative and Mr. Dickie, Chief Financial Officer of the amalgamated undertaking.

We regret to record the death on December 2 at the age of 63 of Mr. Evan R. Davies, Chairman and Managing Director of the Festiniog Railway, Chairman of the Snowdon Moun-

tain Tramroad, and a Director of the Welsh Highland Railway. Mr. Davies, who was serving as Mayor of Pwllheli for the fourth successive year, was closely associated with public life in North Wales for more than 40 years. He took a keen interest in the development of the group of narrow gauge railways around Snowdon and Portmadoc, and played a prominent part in the formation of the Welsh Highland Railway in 1922-3 out of a series of disconnected lines. Mr. Davies practised as a solicitor with his two sons as Evan Davies & Company in London and Evan R. Davies and Davies in Pwllheli; these firms acted as solicitors to the three railways of which he was a director. We refer editorially on page 929 to his recent successful efforts to save the Welsh Highland Railway from abandonment.

Colonel Constable, Chairman of the Madras and Southern Mahratta Railway, has decided to retire from the chairmanship at the end of this month, but will retain his seat on the board as a director. The board has appointed Brigadier-General Sir Charles Magniac, C.M.G., C.B.E., the present Secretary, to fill the vacancy caused by the resignation of Mr. E. E. Sawyer from his directorship, and also as Chairman and Managing Director, as from Jan. 1.

Mr. Herbert E. Morgan, Divisional Signal and Telegraph Engineer, Crewe, L.M.S.R., has been nominated President of the Institution of Railway Signal Engineers for 1935.

We regret to record the recent death of Mr. Joseph Bevan Braithwaite, in his 80th year. He was closely connected with various electricity concerns including the British Electric Traction Co. Ltd., and his timely support did much to establish the Central London Railway Company when first formed.

Dr. Carl Sulzer or Sulzer Schmid, Chairman of the Sulzer concern, whose death we recorded in our issue of November 2, was the eldest son of that distinguished engineer, Henry Sulzer. After practical training in the Winterthur workshops he studied in Lausanne and Dresden. Following experience in America and the Sulzer works, he became a partner in the business in 1895, and shared in the management of the steam engine branch. He was largely responsible for the evolution of the high speed Uniflow engine and took a prominent part in the design and manufacture of steam boilers and high pressure pipe lines. Under his guidance, a boiler of 1,500 lbs./sq. in. pressure was designed, from which the present Sulzer mono-tube steam generator was evolved. When the Sulzer organisation was converted into a limited company in 1914, Dr. Sulzer became Chairman. The Swiss Technical University in Zurich conferred on him the degree of Dr. Ing.h.c.: the V.D.I. also honoured him.





## A Record L.N.E.R. Run

On November 30 the 185·8 miles from King's Cross to Leeds were run in 151 min. 56 sec. down and 157 min. 17 sec. up by the 4-6-2 locomotive "Flying Scotsman"

Much attention has been attracted in recent years to the possibilities of diesel propulsion, chiefly as the result of the successful working in Germany of the Flying Hamburger railcar between Berlin and Hamburg, and investigations have been taking place as to the adaptability of such units to business needs in this country. A test run was made by the L.N.E.R. on Friday, November 30, as a demonstration of the maximum speeds reasonably possible with an ordinary steam locomotive hauling a load to give accommodation similar to that of a diesel-electric unit such as the Flying Hamburger. If comparisons be sought, it should be remembered that the Flying Hamburger has to make one intermediate slack on its journey, at Wittenberge, to 37 m.p.h., and also to run cautiously for the first 8 miles of its journey, from Berlin to Spandau West, where speed is limited to 50 m.p.h., and similarly to restrain speed to 65 m.p.h. for some miles into Hamburg. The route over which it runs, however, is practically flat, whereas the London and North Eastern main line is by comparison quite heavily graded, as a reference to the profile reproduced herewith will show. Several severe speed reductions have to be made, notably through Peterborough, Doncaster, and Wakefield, and minor slowings at Grantham and Retford (in the down direction), and at Lofthouse in both directions.

A provisional schedule of 165 min. for the 185·8 miles' journey, each way, was laid down for the test train of four coaches, consisting of dynamometer car, a corridor first of the latest type, a first class dining and kitchen car, and a composite brake. Had the leading coach been a composite brake like the rear coach, instead of the dynamometer car, the seating accommodation of the train would have been 156 places, with full restaurant car accommodation. The tare weight of the test load was thus 144½ tons behind the tender, and inclusive of the officials who travelled in the train, and recording apparatus and stores carried, 147 tons in all. The engine provided was No. 4472, *Flying Scotsman*, of the Pacific type, with boiler working at 180 lb. per sq. in.; this engine is now 11 years old, and had already run 653,071 miles, of which 44,176 miles had been covered since the last repair. No special preparation for the trial had been made. A slight experimental alteration to the blast-pipe, with a view to permitting of freer exhaust, had been made, one of several similar modifications now in course of trial on the L.N.E.R. The driver was W. Sparshatt, and the fireman R. Webster,

both of King's Cross shed. Mr. V. M. Barrington Ward, Superintendent, Western Section, Southern Area, L.N.E.R., travelled in charge of the train, and was accompanied by Mr. C. J. Brown, Engineer, Southern Area, Mr. J. Miller, Engineer, North Eastern

Area, Mr. O. V. Bulleid, Assistant to the Chief Mechanical Engineer, and other officials. In addition to the dynamometer car records, a Hallade record was made in the rear coach. The weather was misty, but the fog which had prevailed during the earlier part of the week had cleared; there was practically no wind.

On leaving the terminus, round the curve from No. 11 platform, the engine slipped slightly, but afterwards got away very rapidly up the initial 1 in 107 grade, and by Wood Green was doing 71½ m.p.h. Up the 1 in 200

L.N.E.R. EXPERIMENTAL RUNS, LONDON TO LEEDS AND BACK. November 30, 1934

Engine, 4-6-2 No. 4472, *Flying Scotsman*. Driver W. Sparshatt, Fireman Webster

DOWN JOURNEY Up JOURNEY  
4 coaches, 144½ t. tare, 147 t. gross 6 coaches, 205½ t. tare, 207½ t. gross

Distance	Schedule	Actual Times	**Max. and Min. Speeds	Stations	Distance	Schedule	Actual Times	**Max. and Min. Speeds
Miles	Min.	Min. Sec.	M.p.h.		Miles	Min.	Min. Sec.	M.p.h.
0·0	0	0 00	—	KING'S CROSS ..	185·8	165	157 17	—
2·5	—	4 04	55	FINSBURY PARK ..	183·3	—	153 22	—
3·4	—	4 59	—	Harringay ..	182·4	—	152 28	—
4·0	—	5 34	—	Horseay ..	181·8	—	151 58	—
5·0	—	6 25	71½	Wood Green ..	180·8	—	151 13	81
6·4	—	7 40	67	New Southgate ..	179·4	—	150 09	83½
9·2	—	10 07	68½	New Barnet ..	176·6	—	148 08	79½
10·6	—	11 22	68	Hadley Wood ..	175·2	—	147 03	77½
12·7	—	13 16	67	Potter's Bar ..	173·1	—	145 16	69½
14·6	—	14 41	—	Brookman's Park ..	171·2	—	143 47	72½
17·7	19	17 03	83½	HATFIELD ..	168·4	148	141 11	85
20·3	—	19 09	60½	Welwyn Garden City ..	165·5	—	139 16	80
22·0	—	20 45	—	Welwyn North ..	163·8	—	137 58	77
23·5	—	22 06	68½	Woolmer Green ..	162·3	—	136 48	72
25·0	—	23 26	†81½	Knebworth ..	160·8	—	135 31	†76½
28·6	—	26 05	80½	Stevenage ..	157·2	—	132 37	70½
31·9	30	28 22	93½	HITCHIN ..	153·9	137	129 50	72½
35·7	—	30 48	94½	Three Counties ..	150·1	—	126 43	76½
37·0	—	31 40	††85½	Arlesey ..	148·8	—	125 38	75
41·1	—	34 27	91½	Biggleswade ..	144·7	—	122 00	62½
44·1	—	36 24	92½	Sandy ..	141·7	—	118 33	‡40
47·5	—	38 38	93½	Tempsford ..	138·3	—	115 55	80½
51·7	—	41 29	85	St. Neot's ..	134·1	—	112 38	71½
56·0	—	44 24	§90	Offord ..	129·8	—	109 08	eased
58·9	50	46 31	81½	HUNTINGDON ..	126·9	116	106 42	80½
62·0	—	48 58	72½	Mile-post 62 ..	123·8	—	104 11	80½
63·5	—	50 11	—	Abbots Ripton ..	122·3	—	102 37	72
69·4	—	54 28	83½	Holme ..	116·4	—	98 31	83½
72·6	—	56 57	75	Yaxley ..	113·2	—	96 05	72½
75·0	—	58 57	—	Fletton Junction ..	110·8	—	93 52	—
76·4	66	60 39	*21	PETERBOROUGH ..	109·4	100	92 00	*25
78·0	—	63 29	—	Mile-post 78 ..	107·8	—	90 10	—
79·5	—	64 20	71½	Werrington Junction ..	106·3	—	89 00	80½
81·9	—	66 14	79	Helston ..	103·9	—	87 14	84
84·8	—	68 26	80½	Tallington ..	101·0	—	85 10	86½
88·6	—	71 13	84	ESSENDINE ..	97·2	—	82 38	98
92·2	—	73 47	83½	Little Bytham ..	93·6	—	80 25	95½
97·1	—	77 21	82½	Corby ..	88·7	—	77 11	85½
100·1	—	79 33	81½	Stoke ..	85·7	—	74 54	68½
102·0	—	80 58	*87½	Great Ponton ..	83·8	—	73 14	68½
105·5	92	83 39	*62	GRANTHAM ..	80·3	74	70 18	73½
109·7	—	87 16	—	Barkstone ..	76·1	—	66 45	††69
111·5	—	88 41	77½	Hougham ..	74·3	—	65 13	75
115·4	—	91 24	90	Claypole ..	70·4	—	62 13	78
120·1	103	94 38	86½	NEWARK ..	65·7	62	58 28	77½
126·4	—	99 10	82½	Carlton ..	59·4	—	53 44	—
127·4	—	99 54	81	Crow Park ..	58·4	—	53 01	81½
131·3	—	102 25	—	Dukeries Junction ..	54·5	—	50 08	81½
131·9	—	103 29	—	Tuxford ..	53·9	—	49 42	81½
133·7	—	104 53	76½	Markham ..	52·1	—	48 23	73½
135·5	—	—	83½	Gamston ..	50·3	—	46 55	73½
138·6	119	108 44	*69	RETFORD ..	47·2	47	44 28	81½
141·7	—	111 19	81½	Sutton ..	44·1	—	42 14	85
143·9	—	112 53	87	Ranskill ..	41·9	—	40 41	86½
145·8	—	114 11	88½	Scooby ..	40·0	—	39 23	88½
147·7	—	115 30	—	Bawtry ..	38·1	—	38 04	83½
149·5	—	116 50	79	Piper's Wood ..	36·3	—	36 44	73
151·3	—	118 08	87½	Rossington ..	34·5	—	35 18	77½
153·2	—	119 31	—	Black Carr Junction ..	32·6	—	33 49	75
156·0	133	122 27	*40	DONCASTER ..	29·8	32	30 58	*35
158·8	—	124 29	—	Castle Hills ..	27·0	—	28 58	—
160·0	—	126 38	76½	Carcroft ..	25·8	—	27 01	*72
162·5	—	128 37	81½	Hampole ..	23·3	—	25 03	81½
164·7	—	130 17	80½	South Elmsall ..	21·1	—	23 25	77½
167·9	—	132 41	81	Hemsworth ..	17·9	—	20 47	74½
170·4	—	134 37	77½	Nostell ..	15·4	—	18 33	61½
171·9	—	135 43	83½	Hare Park ..	13·9	—	17 05	64½
174·2	—	137 26	—	Sandall ..	11·6	—	14 55	63½
175·9	151	139 28	*35	WAKEFIELD ..	9·9	14	12 42	*39
177·0	—	—	57	Wenthorpe North ..	8·8	—	11 16	—
178·3	—	141 22	*40	Lofthouse ..	7·5	—	9 46	*48
180·2	157	144 39	55½	Ardsley ..	5·6	9	7 46	54
183·3	—	147 46	68	Beeston ..	2·5	—	4 17	56
185·3	—	150 15	*10	Holbeck ..	0·5	—	1 36	—
185·8	165	151 56	—	LEEDS (CENTRAL)	0·0	0	0 00	—

Down journey: Left King's Cross 9·8 a.m. Arrived Leeds (Central) 11·40 a.m.

Up journey: Left Leeds (Central) 2·0 p.m. Arrived King's Cross 4·37 p.m.

\* Service slack; \* Maximum before shutting off steam; † Maximum at Langley; ‡ Minimum by brakes; ‡ Maximum before easing for curves; †† Minimum at Langford; ‡ Permanent-way relaying slack; ‡† Minimum at Peascliffe tunnel.

\*\* At or at changes of gradient near station shown in centre column.

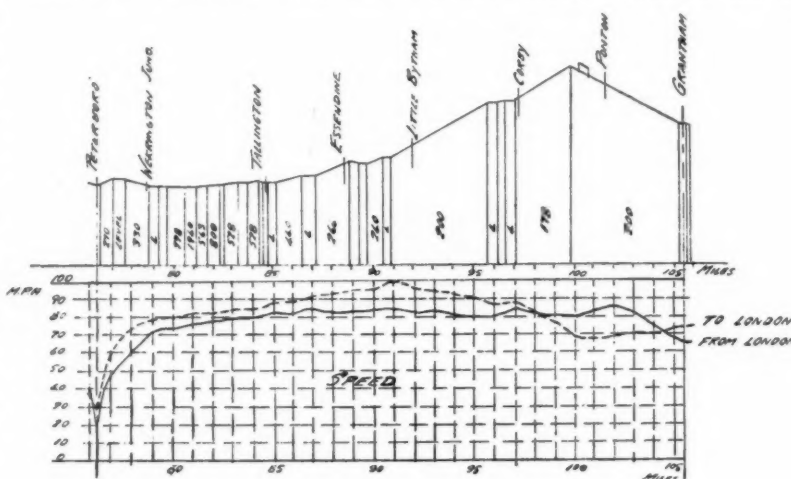
thence to Potter's Bar speed was steady at 67.68 m.p.h. throughout. The descent to the Lea Valley was somewhat hampered, however, by the brakes leaking on slightly between Hatfield and Welwyn Garden City, bringing speed down from 83½ m.p.h. (before Hatfield) to 60 m.p.h. at m.p. 20, whence there was a recovery to 68½ m.p.h. up the 1 in 200 to Woolmer Green summit. Over the favourable stretch north of Stevenage very high speeds ruled; the average over the 24.1 miles from Hitchin to Offord was 90.2 m.p.h., with a maximum of 94.7 m.p.h. near Three Counties. Speed was well maintained at about the 90 m.p.h. level over the flat section past Biggleswade, Sandy, and Tempsford; and would have been continued as far as Huntingdon had not the engine been eased round the curves near Offord. Peterborough was thus passed in 39 sec. over the hour, a distance of 76.4 miles.

The most impressive section of the journey was that which immediately followed. Accelerating on the level to 80 m.p.h. at Tallington, the engine never dropped below that figure during the whole of the ascent to Stoke Summit. The 1 in 200 length was surmounted at a steady speed of 82.2 m.p.h., and after a momentary rise to 84 on the short and easier length through Corby station, the final three miles at 1 in 178 were surmounted with no lower minimum than 81 m.p.h., where the engine was working at 40 per cent. cut-off. The ten miles between posts 90 and 100 occupied 7 min. 16.4 sec., which gives an average speed of 82.5 m.p.h. throughout. Speed was eased below Great Ponton, and reduced to 62 m.p.h. through Grantham, also to 69 m.p.h. through Retford. The highest speeds attained here were 90 m.p.h. near Claypole and 88½ m.p.h. at Scrooby. In the first two hours from King's Cross, including the severe slack through Peterborough, the train travelled 153½ miles, so averaging 76.9 m.p.h. to this point; the 150 miles from Harringay to Black Carr Junction, pass to pass, were covered at an average of 78.4 m.p.h.

After slowing to 40 m.p.h. for the divergence north of Doncaster, and further slight trouble with brakes leaking on from there to Castle Hills, the engine attained 81½ m.p.h. up the 1 in 440 to Hampole, and surmounted both the 1½-mile stretches at 1 in 150 that follow without the speed falling below 77½ m.p.h. More remarkable, perhaps, was the recovery from the 35 m.p.h. slowing through Wakefield to 57 m.p.h. up the succeeding 1 in 100, and speed was still rising when it had to be reduced for Lofthouse curve. After passing Holbeck at a dead slow speed, the train stopped at Leeds Central station in 151 min. 56 sec. from London, having thus achieved a start-to-stop average of 73.4 m.p.h., and cut just over 13 min. from the provisional schedule. Out of this distance a total of no less than 155 miles had been

covered at an average of 80 m.p.h. For the return journey, as previously mentioned, the load was made up to six vehicles, weighing empty 205½ tons, and 207½ tons in all behind the engine tender. The sharp rise for ¾-mile from Holbeck at 1 in 50 was surmounted at 36½ m.p.h., and 56 attained before the commencement of the 3¼ miles at 1 in 100 to Ardsley, which were mounted steadily at 54 m.p.h. On the succeeding descent speed barely exceeded 60 m.p.h., and severe slacks were necessary at Lofthouse and Wakefield. Also, after

Beyond Peterborough the running was, for the most part, of slightly less note; 8 min. had been gained on the provisional schedule to this point, but over one or two subsequent stages, the engine, after the sustained and arduous power output of this lengthy journey, began to show symptoms of slight shortness of steam, notably at Huntingdon. The fireman must, indeed, have been feeling the strain involved in shifting a total of 9 tons of coal on the round journey. A permanent way check was also encountered at Sandy, causing a probable loss of



PERFORMANCE OF ENG 4472 BETWEEN  
PETERBORO AND GRANTHAM. 30. Nov. 1934

mounting the 1 in 150 to Nostell at 61½ m.p.h. minimum, slight speed reductions at both Hemsworth and beyond Hampole had to be made on the falling grades to Doncaster. After slowing to 35 m.p.h. at Doncaster, the engine performed a striking feat of acceleration. Assisted by ¾-mile falling at 1 in 264, and followed by level track for 2½ miles, speed rose in 4 miles from the slack to 77½ m.p.h., did not fall below 73 m.p.h. up 2½ miles at 1 in 198 to Piper's Wood, and rose again to 88½ down the similarly-inclined 3-mile descent to Scrooby troughs. Nothing further of exceptional note occurred until the long ascent of 14 miles to Stoke summit had been surmounted at a minimum speed of 68½ m.p.h. Speed steadily rose down the succeeding bank, until a culmination was reached with an average rate of 97.3 m.p.h. over the 3 m. 46½ c. from Little Bytham to Essendine. The observers in the train, timing by means of stop-watches, from the mile posts, made the maximum speed achieved vary from 98 to 100 m.p.h. This difference represents only ½ sec. over a ¼ mile, and as the dynamometer record showed 100 m.p.h., there is no reason to dispute this figure.\* The 15.2 miles from Corby to Helpston were run at an average of 90.2 m.p.h.

\* We reproduce the official L.N.E.R. graph of this part of the run.

slightly under 2 min. Nevertheless, the long ascent to Stevenage was surmounted at a minimum speed of 71 m.p.h.—another excellent achievement—and with comparatively moderate speed down the final descent from Potter's Bar, King's Cross was reached in 157 min. 17 sec. from Leeds, or 155½ min. net. Thus the journey was completed at an average start-to-stop speed of 70.9 m.p.h., and in 7½ min. less than the provisional schedule, or 9½ min. less, if allowance be made for the Sandy check. Of the up journey a total of 94½ miles was run at an average of 80 m.p.h., making, with the down journey, a total of exactly 250 miles of the round trip covered at this high speed. Between 35 and 40 miles were traversed at the higher average of 90 m.p.h. Both these runs were faster from start-to-stop than any runs of such length previously made in Great Britain, and from the records available it is safe to say that no steam locomotive in any part of the world has previously achieved such a feat as to cover 250 miles in the course of one round trip at so high an average speed as eighty miles an hour. The times and speeds on the journey, as tabulated in this description, were recorded by Mr. Cecil J. Allen, M.Inst.T., who also broadcast an eye-witness account of the journey in the National programme on the same evening:

## Railway Companies' Reduced Fare Programme for 1935

The public support accorded to the railway companies' policy of cheaper return fares has been such as to justify the retention, as a permanent feature of British railway travel, of the third class penny-a-mile return-within-a-month facility. Hitherto this has been known as a "summer" ticket and was experimentally introduced in May, 1933, since when 35,000,000 such tickets have been issued. With the New Year, not only will this become a permanent facility, to be known as the "monthly return" ticket, but further it will be available for use on the outward as well as the return journey any day within one calendar month from the date of issue. Hitherto it has been necessary to complete the outward journey within three days; now break of journey will be permitted in each direction, and in many cases where two or more railways operate in the same territory tickets will be available on the return journey by alternative routes. On the G.W.R., L.M.S.R., and L.N.E.R., the minimum fares for these tickets will be 3s. 9d. first class and 2s. 6d. third class. On the Southern Railway the minimum fares will be 7s. 6d. and 5s. respectively.

The following are specimens of the old and new fares:—

From London to	Ordinary Return		Summer Return (1934)*		Monthly Return (1935)	
	1st Class	3rd Class	1st Class	3rd Class	1st Class	3rd Class
Aberdeen	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
Aberystwyth	206 8	124 0	138 0	124 3	82 9	
Bath	44 8	26 10	30 0	27 0	18 0	
Birmingham	46 4	27 10	31 0	28 3	18 9	
Blackpool	94 8	56 10	63 3	57 0	38 0	
Bournemouth	44 10	27 0	30 0	27 0	18 0	
Brighton	21 4	12 10	14 3	13 3	8 9	
Cardiff	63 10	38 4	42 9	38 9	25 9	
Chester	74 10	45 0	50 0	45 0	30 0	
Coventry	39 2	23 6	26 3	23 9	15 9	
Edinburgh	165 0	99 0	110 0	99 0	66 0	
Exeter	71 8	43 0	48 0	43 3	28 9	
Folkestone	30 6	18 4	20 6	18 6	12 3	
Glasgow	167 4	100 6	111 9	100 6	67 0	
Inverness	219 2	131 6	146 3	131 9	87 9	
Leeds	77 6	46 6	51 9	46 6	31 0	
Liverpool	82 6	49 6	55 0	49 6	33 0	
Manchester	76 6	46 0	51 0	46 3	30 9	
Margate	31 2	18 8	21 0	18 9	12 6	
Newcastle-on-Tyne	113 2	68 0	75 6	68 3	45 6	
Norwich	48 4	29 0	32 3	29 3	19 6	
Nottingham	51 6	31 0	34 6	31 3	20 9	
Penzance	126 6	76 0	84 6	76 3	50 9	
Plymouth	93 10	56 4	62 9	56 9	37 9	
Scarborough	96 2	57 8	64 3	57 9	38 6	
Sidmouth	70 0	42 0	46 9	42 0	28 0	
Torquay	82 6	49 6	55 0	49 6	33 0	

\* Third class summer return fares in 1934 the same as third class monthly return fares for 1935.

As an experiment, there will be a cut of 10 per cent. on first class cheap fares, the basis of which in future will be 50 per cent. (instead of 66·6 per cent.) over the corresponding third class cheap fares. This will apply to monthly return, cheap day, excursion, and other reduced fares. In the case of the monthly return ticket this will mean that from January 1, passengers who,

before the introduction of "summer" tickets in 1933 paid 1½d. a mile for third class travel, will be able to travel first class at the same rate. In the case of day and excursion tickets the first class rate will be even lower.

Where tourist tickets are issued from May 1 to October 31 inclusive, the fares will be reduced by 26 per cent. first class and 18 per cent. third class. The bookings will be subject to minimum fares of 22s. 6d. first class and 15s. third class, and the existing ticket availability of three months will be continued.

The issue of ordinary tickets will remain unchanged, but the availability of outward halves of ordinary return tickets will be extended from 3 days to 3 months; return tickets will therefore be available for use on the outward or return journeys any day within 3 months from date of issue. They will also admit of break of journey in each direction, and in many cases where two or more railways operate in the same territory these tickets will be available on the return journey by alternative routes.

A number of special cheap facilities now in operation will be continued, such as holiday season tickets, and evening excursions at very low fares. The rates for conveyance of motor cars accompanying passengers, which were reduced a year or two ago to 3d. a mile for the outward journey and 1½d. a mile for return journey, will have an added value to passengers taking advantage of the new reductions in the fares for first class travel by monthly return and tourist tickets.

Not only will these reduced fare facilities prove of benefit to the British public who have already shown their appreciation of the 1934 experiment, but they should have a favourable influence on the internal travel of the large number of overseas and Continental visitors expected in 1935.

The foregoing announcement was made at a luncheon last Monday over which Mr. Ashton Davies, Chief Commercial Manager of the L.M.S.R., presided. Mr. Ashton Davies was supported by Mr. T. W. Royle and Mr. Loftus Allen of the L.M.S.R., Mr. C. J. Selway and Mr. E. G. Marsden of the L.N.E.R., Mr. E. C. Cox and Mr. C. Grasemann of the Southern Railway, Mr. K. W. C. Grand, Major J. Dewar, and Mr. G. E. Orton of the G.W.R., Mr. P. H. Price, Mr. J. R. Hind and Mr. A. J. Foale. In reply to a question Mr. Ashton Davies explained that there would be no reduction in the rates for season and workmen's tickets, which were already on a low basis. These tickets, said Mr. Ashton Davies, represented only about 20 per cent. of the passenger revenue of the railways.

Mr. E. C. Cox, referring to the higher minimum fares charged by the

Southern Railway, explained the special position of that company in that, whereas the other main line railways derived between 70 and 75 per cent. of their revenue from goods traffic, the Southern derived between 72 and 75 per cent. from passenger traffic. Any reductions in fares therefore affected the Southern to a much greater extent than the other companies. Further, the average Southern Railway journey was shorter than that of the other lines and the average fare was consequently a good deal lower. Mr. Cox also pointed out, in reply to a question, that so long as the public had the habit or was compelled by circumstances to travel at certain peak hours, so long would it be impossible to avoid a certain amount of overcrowding.

Numerous other questions were asked and answered to the satisfaction of the questioners, and Mr. Ashton Davies concluded by expressing the hope that the reduced fare facilities arranged for 1935 would prove a mutual benefit to the public and the railway companies. The latter would carefully watch developments and take any necessary steps to assure adequate accommodation for increased traffic.

(See editorial article on page 932)

## Getting and Holding Traffic

There was a crowded attendance of members at the G.W.R. Lecture and Debating Society's meeting on November 29, when Mr. F. W. Lampitt (Commercial Assistant to the Chief Goods Manager) gave an address on "Getting and Holding Traffic." Mr. H. Wheeler (Assistant to the General Manager) was in the chair.

Freight development involved a two-fold activity—effective intelligence and prompt action, said Mr. Lampitt. He had great faith in personal contacts. The successful railway salesman must be possessed of many qualities, which might perhaps be summed up in the five "I's," intelligence, interest, initiative, imagination and industry. He must have a personality which inspires confidence in his customers.

Recognising that the old methods of canvassing were out of date, the G.W.R. had initiated a series of classes throughout the system on the principles and practice of scientific sales methods as applied to railway transport. Regular meetings with outdoor representatives were held at headquarters and throughout the system. Behind the front line men was a vast organisation each member of which was concerned directly or indirectly with the selling campaign. These included porters, checkers, shunters, and other members of the station staff, train crews, carmen and motor drivers, clerks, and indeed every member of the staff.

Efficient and satisfactory service led to more business, and the better the service, the less it cost. Close scrutiny of the press was an effective method



of getting business. Information passed on by the staff also helped to secure traffic. Although individual efforts might appear small, in a staff of 100,000 employees, there were tremendous possibilities of united effort. Price, service and facilities predominated in securing and holding business.

Recent changes in business methods had led firms to dispense with large stocks, and rapidity in transport was therefore essential. Freight train services had been completely reorganised, and by means of a daily complement of some 2,000 freight services, including between 70 and 80 express vacuum fitted services, next morning deliveries were effected in a large number of cases. Terminals had been modernised, marshalling yards improved, mechanical appliances introduced and many other improvements effected. The company's registered transit scheme was also gaining in popularity. The container system was an important factor in developing freight service. Whereas in 1928 they had 236 containers, to-day they had nearly reached the 1,600 mark. They had a complete system of container control.

Household removals business had greatly expanded. In the first 10 months of 1934, the G.W.R. had carried out 4,875 removals, and the railways had created special facilities for this work. Traders had also availed themselves of the railways' special storage facilities, which enabled them to buy and hold stocks in bulk at convenient points and distribute as needed. The railways also now undertook the actual sale of goods from stock. Allied to these facilities were the express railroad delivery services within a 30 mile radius. Many other special services were performed for individual firms, and the lecturer foresaw great developments in this field.

The company had also greatly assisted in the development of industries by providing all facilities for securing and developing factory sites along the system. During the past three years, over 150 new works had been thus established on the G.W.R. They were alive to the importance of agriculture and the keenness of road competition in this field, and had developed many facilities for the assistance of farmers, including special low rates, lorry services, market and fair facilities, insurance of live stock, special containers, express trains, and others. Much could also be done to develop shipping traffic, and the company had a special staff for this work. The Docks Department, could handle large overseas contracts and make special arrangements for both export and import traffic.

A necessary adjunct to salesmanship was publicity, and this involved an effective and progressive advertising policy. The traffic department was continually thinking ahead, was open to consider practical suggestions, and was always seeking to develop business.

## RAILWAY AND OTHER MEETINGS

### MADRAS & SOUTHERN MAHRATTA RAILWAY CO. LTD.

The eighty-third ordinary general meeting of the Madras & Southern Mahratta Railway Co. Ltd. was held at the company's offices, 25, Buckingham Palace Road, S.W.1, on December 5. In the absence of Colonel Constable, owing to indisposition, the chair was taken by Lt.-Col. Bonham-Carter, late R.E.

The Secretary (Brig.-General Sir Charles Magniac, C.M.G., C.B.E.) read the notice convening the meeting and the auditors' report.

The Chairman, in moving the adoption of the report and accounts, drew attention to an addition of Rs. 2.77 lakhs to the capital account as compared with 1932-33. The items of way and works and of rolling stock were respectively Rs. 11.60 lakhs and Rs. 9.76 lakhs, against Rs. 7.46 lakhs and Rs. 8.05 lakhs, but the decrease of Rs. 18.59 lakhs under stores and suspense was Rs. 6.76 lakhs greater than that recorded last year. The gross earnings for the entire system of Rs. 772.38 lakhs showed an improvement of Rs. 31.29 lakhs over 1932-33, but were Rs. 18.28 lakhs less than in 1931-32.

The total working expenditure for the year increased by 12.04 lakhs to 432.08 lakhs, amounting, however, to a percentage of 55.95 of receipts instead of 56.7 as before. All departments of the railway had sought for new avenues of economy, but whatever might be done in other directions, the renewal of wasting assets could not be deferred without jeopardising efficiency. The expenditure for this purpose had risen from Rs. 55.08 lakhs to 56.36 lakhs.

The total sum realised on net revenue account, including earnings from investments, was £235,286 10s. 6d., or £26,503 16s. 8d. more than in the preceding year. An interim dividend of £4 10s. per cent. had been paid in July and the final dividend of £5 per cent. recommended for the year would make a total 10s per cent. greater than was paid in 1932-33. The reserve fund of £400,000 and the dividend equalisation account of £225,000 shown in the balance sheet were represented by investments having a current value considerably in excess of their purchase price.

It was hard to forecast the final results for the present year owing to the fluctuations which had taken place recently. For the half year from April to September, however, gross earnings were up by Rs. 5.95 lakhs and expenses had decreased by Rs. 7.62 lakhs. Net earnings for the same period improved by Rs. 13.57 lakhs, but gross earnings had fallen heavily in November and the Agent feared the decline might continue. The monsoon

had broken and more rain was needed. The area sown under groundnuts was less and passenger traffic was dull. A decrease in net earnings for 1934-35 was therefore anticipated.

The Chairman announced that Mr. E. E. Sawyer had retired from the board in May last owing to ill-health. He had combined exceptional professional qualifications with wide administrative experience and had been of the greatest value to the company. On December 31 next, Colonel Constable, Chairman of the company since 1916, would resign that office but retain his seat on the board. The present Secretary, Brig.-Gen. Sir Charles Magniac, had been appointed to fill the vacancy caused by Mr. Sawyer's resignation and also to be Chairman and Managing Director of the company.

The Chairman then asked the concurrence of the stockholders in the formation of a London Office Contingency Fund, designed to meet expenses which might arise if the company was wound up on the termination of the contract with the Secretary of State for India on December 31, 1937. The directors proposed to allocate an initial sum of £7,500 for this purpose. The fund would help to provide for members of the London office staff whose age might make it difficult for them to find employment elsewhere. The scale of compensation would be based on that sanctioned by Parliament under the Railways Act of 1921.

The foregoing resolution, and the report and accounts, were unanimously adopted.

### Railway Reports

**London Midland & Scottish Railway.**—The Secretary writes, November 29:—"The directors of the London Midland & Scottish Railway Company, at their meeting to-day, had under consideration the dividend on the 5 per cent. redeemable preference stock (1955), which ranks *pari passu* with the company's 4 per cent. preference stock, and decided that a final dividend of £3 2s. 6d. per cent. be paid, making with the interim dividend of £1 17s. 6d. per cent., £5 per cent. for the year. The warrants in respect of this dividend will be posted on December 31."

**Buenos Ayres Midland Railway.**—The report for the year to June 30 last states that all rent due to date and payable by the Buenos Ayres Great Southern and the Buenos Ayres Western Railway Companies has been received and distributed, and that the balance of profit and loss was £1,333, against £1,269. The Board has created and issued to the working companies a further £400,000 of 4 per cent. debenture stock in reduction of their capital advances to the Midland Company.

## NOTES AND NEWS

### Extended Christmas Cheap Fares.

—From December 24 to 27 inclusive, cheap day return and early closing tickets will be issued daily by all companies, without limitations as to train service.

**Weekly Seasons for Evening Travel in Glasgow.**—On December 3, the L.M.S.R. inaugurated weekly seasons for travel at or after 5.0 p.m. (or 2.0 p.m. on Saturdays) between stations on the Cathcart Circle and King's Park and Glasgow. The validity is from Monday to Saturday and the fares are 1s. 6d. first class and 1s. third class.

**New 20-ton Coal Shipping Appliance, Swansea Docks, G.W.R.**—The G.W.R. brought into use on December 3 a new movable hoist with traverser, on the northern side, King's Dock, Swansea. This hoist, which provides an additional coal shipping facility, is capable of dealing with 20-ton wagons. It is able to load into a vessel at any point over a distance of 255 ft.

**Acceleration of L.N.E.R. Freight Services.**—Certain of the important L.N.E.R. night freight trains are being speeded up in pursuance of the company's policy of providing over-night services for goods traffic. The total amount of time to be saved per night on this group of trains amounts to 13 hr. 50 min. These accelerations have been made possible by the provision of specially-constructed wagons fitted with the continuous brake, which will enable the trains to be run at express speeds.

**The Week's Road Accidents.**—The Ministry of Transport return for the week ended December 1 of persons killed or injured in road accidents is as follows:—

	Killed	Deaths resulting from previous accidents	Injured
England	95 (100)	29 (21)	3,552 (3,367)
Wales ...	3 (3)	3 (1)	135 (149)
Scotland	9 (20)	1 (1)	336 (364)
	107 (123)	33 (23)	4,023 (3,880)

The total fatalities of the week, as the result of road accidents, were therefore 140, as compared with 146 for the previous week.

**L.N.E.R. Stratfordians' Association Dinner.**—Colonel F. W. Pickance took the chair at a reunion dinner of the Stratfordians' Association, held at the Liverpool Street Hotel on November 23. About sixty members of the association, which is formed of past and present staff of the Chief Mechanical Engineer's Department, were present. The toast of "Old Stratfordians all over the world" was proposed by Mr. L. P. Parker and responded to by Mr. A. C. Kelly. Mr. T. O. Mein proposed "The London and North Eastern Railway Company and present Stratford men," to which Mr. William

Whitelaw responded. "The Chairman" was proposed by Mr. F. V. Russell. The following formed the committee:—

Messrs. C. W. L. Glaze (Chairman), S. L. Baister, A. M. Bell, J. I. Hill, T. O. Mein, A. H. Peppercorn, W. F. Pettigrew, Col. F. W. Pickance, Messrs. F. V. Russell, E. Thompson A. W. Headley (Hon. Sec.).

**Accident on Vesuvius Railway.**—Seven persons were killed and nine injured when an electric train on Cook's Vesuvius Railway ran away out of control and became derailed on November 29.

**New Buenos Aires Underground Closed.**—According to a Reuters message, the new Spanish Underground recently inaugurated by President Justo was officially closed down by the Municipality on December 4, after a series of accidents and derailments, pending an examination.

**New Scottish Air Service.**—Northern and Scottish Airways Limited reopened on December 1, the route between Glasgow, Kintyre, and Islay, previously operated by Midland-Scottish Air Ferries Limited. During the winter the service is being run on Tuesdays, Thursdays, and Saturdays.

**Telsen Electric Co. Ltd.**—Alfred Herbert Limited, Coventry, has purchased the assets from the receivers of the Telsen Electric Co. Ltd., and has in turn sold the goodwill, stock-in-trade and trade name to David Rosenfield Limited, Manchester, which firm will continue the Telsen business. Alfred Herbert Limited is in no way interested in the manufacture of wireless components.

**British Railway Stockholders' Union.**—An increase of 23 per cent. in membership during the year ended October 31 last, is recorded in the report of the executive committee of the British Railway Stockholders' Union Limited, which was issued on December 5. The report states that though gross revenues had shown an increase of £5,000,000 with six weeks still to run, it was not yet known what proportion of that total had been absorbed in increased working expenses. Probably of even greater importance than the actual restitution of a part of the wage cuts was the extent to which the controversy on this subject had emphasised the importance of a strong and impartial wages tribunal.

**Agreed Charges.**—Thirty-one more applications for the approval of agreed charges under the provisions of Section 37 of the Road and Rail Traffic Act, 1933, have been lodged with the Railway Rates Tribunal, as will be seen from the legal notice published on page 956. These applications may be inspected at the office of the Tribunal, 2, Clement's Inn, Strand, W.C.2, at the Railway Clearing House, London, and at 11 named centres outside London. A copy of each application (1s. post free) may be obtained from Mr. G. Cole

Deacon, Secretary, Rates and Charges Committee, 35, Parliament Street, S.W.1

**A.E.C. Engine in an Australian Railcar.**—The Queensland Government Railways petrol railcar for local services, shown in the top illustration on page 46 of our *Overseas Railways Number*, dated November 28, is fitted with an A.E.C. engine of the Associated Equipment Co. Ltd., Southall, Middlesex.

**The "Cock o' the North" on its way to Vitry.**—The L.N.E.R. 2-8-2 express locomotive *Cock o' the North* is now on its way via the Harwich train ferry to the testing plant at Vitry, near Paris. The *Cock o' the North* is being accompanied to France by its own supply of coal of the quality usually used by British locomotives on main line work. The coal is loaded in L.N.E.R. 40-ton wagons accompanying the locomotive on the train ferry.

### Sir Felix Pole to Report on Proposed Palestine Railway Diversion.

—Sir Felix Pole, Chairman, Electrical Industries Limited, and formerly General Manager, Great Western Railway, is, we understand, devoting a part of a forthcoming vacation to visiting Palestine, and at the invitation of the Colonial Office will also investigate and report on a proposal that the main line of the Palestine Railway should be diverted through Tel-aviv and a central railway station be established for Jaffa and Tel-aviv.

**Railway Rates Tribunal.**—As will be seen from the legal notice on page 957, the Railway Rates Tribunal will sit on Tuesdays, January 15, February 12, March 12, April 9, May 14, June 18, July 16, October 15, November 12, and December 10, 1935, to hear applications as to the granting of new, or the reduction of existing, exceptional rates. The Court will also sit on Tuesdays, January 22, April 16, July 23, and October 22, 1935, to hear applications to determine any questions as to classification of merchandise; applications as to the reductions to be made from the standard charges where damageable merchandise is carried under owner's risk conditions; and applications as to rebates under the Railway Freight Rebates Scheme.

### The Wormley Level Crossing Accident.

—The fatal derailment of a passenger train which struck a motor vehicle at an occupation crossing, on November 27, by which the engine driver and fireman were killed, was inquired into on Monday last by Colonel Trench. From the evidence it would appear that there was some fog, with a visibility of from 150 to 175 yd., but the signalman, in a box not far from the crossing, thought that the driver of the motor vehicle could have seen the signal which was at "clear" for the train. As it was considered necessary to have the evidence of the driver of the motor and of the guard of the train the inquiry was adjourned until December 13. The coroner's inquest was opened on Saturday last, but for the same reason was adjourned until December 11.

## LEGAL AND OFFICIAL NOTICES

IN THE COURT OF THE RAILWAY  
RATES TRIBUNAL

## Road and Rail Traffic Act, 1933.

## Agreed Charges

NOTICE IS HEREBY GIVEN that applications for the approval of Agreed Charges under the provisions of Section 37 of the Road and Rail Traffic Act, 1933, short particulars of which are set out in the Schedule hereto, have been lodged with the Railway Rates Tribunal.

The said Applications may be inspected at the Office of the Tribunal, 2, Clement's Inn, Strand, London, W.C.2, at any time during office hours and at the following places:—

LONDON: Railway Clearing House, 123, Seymour Street, N.W.1.

BIRMINGHAM: District Goods Manager's Office, Snow Hill, Great Western Railway.

CARDIFF: Divisional Superintendent's Office, Great Western Railway.

EXETER: Western Divisional Superintendent's Office, Southern Railway.

LEEDS: District Goods Manager's Office, Wellington Street, London & North Eastern Railway.

LEICESTER: District Goods and Passenger Manager's Office, London Midland & Scottish Railway.

MANCHESTER: District Goods Manager's Office, Hunt's Bank, London Midland & Scottish Railway.

SOUTHAMPTON: Southern Divisional Superintendent's Office, Southampton West, Southern Railway.

YORKS: Goods Manager's Office, London & North Eastern Railway.

ABERDEEN: District Goods and Passenger Manager's Office, London Midland & Scottish Railway.

EDINBURGH: District Goods and Passenger Manager's Office, Waverley Station, London & North Eastern Railway.

GLASGOW: Commercial Manager's Office, Central Station, London Midland & Scottish Railway.

A copy of each Application lodged with the Tribunal can be obtained from Mr. G. Cole Deacon, Secretary, Rates and Charges Committee, 35, Parliament Street, Westminster, London, S.W.1, price 1s., post free.

Notices of objection by any parties entitled to object to the approval of any of the said Agreed Charges must state concisely the grounds of objection and must be filed at the office of the Registrar, 2, Clement's Inn, Strand, London, W.C.2, on or before the 31st day of December, 1934, and a copy thereof on or before the same day served on or sent by registered post to Mr. G. Cole Deacon, at the above address. A separate Notice must be filed and served in respect of each Application.

Each Notice filed must be on foolscap size paper and must be stamped with an adhesive fee stamp for 2s. 6d. (which can be purchased at the office of the Tribunal only). If sent by post for filing each Notice must be accompanied by a Postal Order for 2s. 6d. payable to the Registrar, when a stamp will be affixed at the office. A Notice by a Representative Body of Traders must contain a statement of the facts upon which such body claims to represent a substantial number of traders interested in, or likely to be affected by the decision on, the application.

Four additional copies of each Notice must be lodged with the original at the office of the Registrar.

T. J. D. ATKINSON,

Registrar.

3rd December, 1934.

## Central Argentine Railway Limited.

NOTICE IS HEREBY GIVEN that the Transfer Books of the 4 per cent. Debenture Stock and the 3½ per cent. Central Debenture Stock of the Company will be closed from the 8th to the 20th December, both days inclusive, for the preparation of Interest Warrants for the half-year ending 31st December, 1934.

F. FIGHIERA,  
Secretary.

3A, Coleman Street,  
London, E.C.2.

5th December, 1934.

Universal Directory of Railway Officials  
and Railway Year Book

40th Annual Edition, 1934-35

Price 20/- net.

THE DIRECTORY PUBLISHING CO. LTD.

33, Tothill Street, London, S.W.1.

Number of Application and Date of Lodgment.	Parties to Agreement.	Nature of Agreed Charge.
1934, No. 170— Nov. 30, 1934	F. W. WOOLWORTH & CO. LTD., New Bond Street, London, W.1, and the G.W., L. & N.E., L.M. & S., Southern and Mersey Railway Cos. and L.P.T.B.	Percentage on purchase price. All goods for sale, or use at Trader's Stores, with certain exceptions. Per ton.
1934, No. 171— Nov. 30, 1934	CARRERAS LIMITED, Hampstead Road, London, N.W.1, and the G.W., L. & N.E., L.M. & S. and Southern Railway Cos.	Manufactured Tobacco and Cigarettes, also Advertising Matter. Per ton.
1934, No. 172— Nov. 30, 1934	ACME WRINGERS LIMITED, Glasgow, S.E., and the L. & N.E. and L.M. & S. Railway Cos.	Washing Machines, Wringing Machines and Iron or Steel Stands and Table Tops. Per ton.
1934, No. 173— Nov. 30, 1934	BOOTH'S DISTILLERIES LIMITED, 83, 84 and 85, Turnmill Street, London, E.C.1, and the G.W., L. & N.E., L.M. & S. and Southern Railway Cos.	Wines and Spirits in casks, cases and jars and Advertising Matter. Per ton.
1934, No. 174— Nov. 30, 1934	BOOTH'S DISTILLERIES LIMITED, 83, 84 and 85, Turnmill Street, London, E.C.1, and the G.W., L. & N.E., L.M. & S. and Southern Railway Cos. and L.P.T.B.	Empties returned to the Trader.
1934, No. 175— Nov. 30, 1934	EDWARD CURRAN & CO. LTD., Cardiff, and the G.W. Railway Co.	Per ton.
1934, No. 176— Nov. 30, 1934	THE ENFIELD HIGHWAY CO-OPERATIVE SOCIETY LIMITED, Enfield Wash, and the L. & N.E. Railway Co.	Enamelled Hollowware. Per ton.
1934, No. 177— Nov. 30, 1934	FAIRE BROS. & CO. LTD., Leicester, and the L. & N.E. and L.M. & S. Railway Cos.	Butter, Cheese, Dried Fruits, Flour, Green Bacon, Oileaks, Soap, Meal, Soda, Sugar, and Tinned Goods. Per ton.
1934, No. 178— Nov. 30, 1934	THE GRE-SOLVENT COMPANY, Leeds, and the L. & N.E. and L.M. & S. Railway Cos.	Drapery Articles such as named in Exceptional Rates Lists C and D, as defined in the General Classification of Merchandise; Empties returned to Suppliers. Per ton.
1934, No. 179— Nov. 30, 1934	THE IMPERIAL TOBACCO CO. (OF GREAT BRITAIN AND IRELAND) LTD., Bedminster, Bristol, and the L. & N.E. and L.M. & S. Railway Cos.	Soap, Cleansing Powder and Paste; Polishes; Enamels; Metallic Cement and Flux. Per ton.
1934, No. 180— Nov. 30, 1934	NORTH BRITISH RAYON LIMITED, 6, Clements Inn, London, W.C.2, and the L. & N.E. Railway Co.	Manufactured Tobacco and Cigarettes, Advertising Matter, and Empties returned to Suppliers. Per ton.
1934, No. 181— Nov. 30, 1934	JOHN PATERSON & CO. LTD., Glasgow, and the L. & N.E. and L.M. & S. Railway Cos.	Artificial Silk Yarn. Per ton.
1934, No. 182— Nov. 30, 1934	JOHN PATERSON & CO. LTD., Glasgow, and the G.W., L. & N.E., L.M. & S. and Southern Railway Cos.	Ammoniated Liquid Soap and Ammonia Solution in bottles packed in cases. Per ton.
1934, No. 183— Nov. 30, 1934	THE SUFFOLK IRON FOUNDRY (1920) LIMITED, Stowmarket, and the L. & N.E. Railway Co.	Empties returned to the Trader. Per ton.
1934, No. 184— Nov. 30, 1934	WEBER LIMITED, Central Markets, London, and the G.W., L. & N.E., L.M. & S. and Southern Railway Cos.	Mangles; Mincers; Machines, such as Lawn Mowing or Marking, Wringing; Sports Equipment complete, or in parts; Hardware and Flux. Per ton.
1934, No. 185— Nov. 30, 1934	ACHILLE SERRE LIMITED, Walthamstow, London, E.17, and the G.W., L. & N.E., L.M. & S. and Southern Railway Cos.	Bacon and Hams; Canned Goods; Preserves; Provisions; Butter; Lard; Cheese; Tea; Empties returned to Suppliers. Per package.
1934, No. 186— Nov. 30, 1934	BELAM & BRINLEY, Totnes, and the G.W. Railway Co.	(i) Dyed and Cleaned Goods, also Advertising Material used in connection with the Trader's business. (ii) Goods for Dyeing and Cleaning. Per ton.
1934, No. 187— Nov. 30, 1934	WM. COLLINS, SONS & CO. LTD., Glasgow, C.4, and the L. & N.E. and L.M. & S. Railway Cos.	Rabbits (dead). Per package.
1934, No. 188— Nov. 30, 1934	DRYAD LIMITED, Leicester, and the L. & N.E. and L.M. & S. Railway Cos.	Books and Stationery. Per package.
1934, No. 189— Nov. 30, 1934	DYSON & HORSFALL LIMITED, Preston, and the L.M. & S. Railway Co.	Cane Work, Plywood, Rush Work, Raffia, Cardboard Shapes, Wood Brushes and Tools for Handicraft work. Per package.
1934, No. 190— Nov. 30, 1934	THOS. FATTORINI (SKIPTON) LIMITED, Skipton, Yorkshire, and the L.M. & S. Railway Co.	Clothing, Drapery and General Stores Wares. Per package.
1934, No. 191— Nov. 30, 1934	FULLERS LIMITED, Hammersmith, London, W.6, and the G.W., L. & N.E., L.M. & S. and Southern Railway Cos.	Clothing, Drapery and General Stores Wares. Per package.
1934, No. 192— Nov. 30, 1934	MOORE & SONS, Looe, Cornwall, and the G.W. Railway Co.	Cakes and Confectionery, with incidentals. Per ton.
1934, No. 193— Nov. 30, 1934	JOHN MYERS & CO. LTD., Westminster Bridge Road, London, S.E., and the G.W., L. & N.E., L.M. & S. and Southern Railway Cos.	Rabbits (dead). Per package.
1934, No. 194— Nov. 30, 1934	H. PEARSON LIMITED, Old Trafford, Manchester, and the L. & N.E. and L.M. & S. Railway Cos.	Clothing, Drapery and General Stores Wares. Per package.
1934, No. 195— Nov. 30, 1934	G. ROBINSON & SONS (CORNWALL) LIMITED, Camelford, Cornwall, and the G.W. and Southern Railway Cos.	Clothing and Drapery. Per ton.
1934, No. 196— Nov. 30, 1934	JAS. SMITH & SONS (CLEANERS) LTD., Dewsbury, and the G.W., L. & N.E. and L.M. & S. Railway Cos.	Rabbits (dead). Per ton.
1934, No. 197— Nov. 30, 1934	S. A. SQUIRRELL & CO., Leicester, and the L. & N.E. and L.M. & S. Railway Cos.	(i) Dyed and Cleaned Goods. (ii) Goods for Dyeing and Cleaning. (iii) Returned Empties. Per package.
1934, No. 198— Nov. 30, 1934	VALENTINE & SONS, LTD., Dundee, and the L. & N.E. and L.M. & S. Railway Cos.	Boots and Shoes. Per package.
1934, No. 199— Nov. 30, 1934	GEO. E. WEEKS & CO., Oxford, and the G.W. and L.M. & S. Railway Cos.	Calendars, Pictures (framed), Christmas Cards, Post Cards and Stationery. Per ton.
1934, No. 200— Nov. 30, 1934	THE WESSEX GLOVE CO. LTD., Yeovil, Somerset, and the G.W. and Southern Railway Cos.	Cake, Pies and Confectionery. Per package.
		Gloves.



## Legal and Official Notices—(continued)

## RAILWAY RATES TRIBUNAL.

RAILWAYS ACT, 1921.  
LOCAL GOVERNMENT ACT, 1929.

NEW EXCEPTIONAL RATES.  
REDUCTION OF EXCEPTIONAL RATES.  
CLASSIFICATION OF MERCHANDISE.  
REDUCTIONS FOR OWNER'S RISK.  
RAILWAY FREIGHT REBATES SCHEME.

NOTICE IS HEREBY GIVEN that the Court of the Railway Rates Tribunal will sit on the following dates:—

Tuesday, 15th January, 12th February, 12th March, 9th April, 14th May, 18th June, 16th July, 15th October, 12th November and 10th December, 1935, to hear:

Applications as to the granting of New or the reduction of existing Exceptional Rates for which the consent of the Tribunal is required,

and  
Applications to the Tribunal for New Exceptional Rates or for the reduction of Exceptional Rates.

NOTICE IS FURTHER GIVEN that the Court will sit on the following dates:—  
Tuesday, 22nd January, 16th April, 23rd July and 22nd October, 1935, to hear:

Applications to determine any questions as to the alteration of the Classification of Merchandise, or the alteration of the Classification of any article, or the Classification of any article not at the time classified, or any question as to the Class in which any article is classified.

Applications as to the Reductions to be made from the Standard Charges where Damageable Merchandise is carried under Owner's Risk Conditions,

and  
Applications to determine any question as to whether any Rebate is or was allowable or as to the basis on which any Rebate should be or should have been calculated under the Railway Freight Rebates Scheme.

The Procedure to be followed is that published in the *London Gazette* of the 20th January and 9th March, 1928, and 29th November, 1929.

Printed copies of the Prescribed Procedure for any of the above-mentioned Applications

can be obtained from the Office of the Tribunal.

T. J. D. ATKINSON,  
Registrar.

2, Clement's Inn,  
Strand, London, W.C.2.  
1st December, 1934.

## Bengal-Nagpur Railway Company Limited.

THE Directors are prepared to receive Tenders for:—

- (A) 6,048 STEEL VOLUTE SPRINGS.
- (B) 4,149 STEEL SPIRAL SPRINGS.
- (C) 1,472 STEEL LAMINATED BEARING and WAGON DOOR CHECK SPRINGS.
- (D) 1,400 STEEL TYRES FOR CARRIAGES and WAGONS.
- (E) 984 STEEL TYRES FOR ENGINES and TENDERS.

Specifications and Forms of Tender can be obtained at the Company's Offices, 132, Gresham House, Old Broad Street, London, E.C.2, on or after Tuesday, 4th December, 1934.

A fee of 10s. will be charged for each copy of the Specification, which is not returnable.

Tenders must be submitted not later than noon, as follows:—

Specification (A) on Friday, 14th December, 1934.

Specification (B) on Monday, 17th December, 1934.

Specification (C) on Tuesday, 18th December, 1934.

Specification (D) on Wednesday, 19th December, 1934.

Specification (E) on Thursday, 20th December, 1934.

The Directors do not bind themselves to accept the lowest or any Tender, and reserve to themselves the right of reducing or dividing the order.

By Order of the Board,

R. GRANT,  
Secretary.

WELL-EDUCATED ASSISTANT required in editorial department of important weekly technical journal. Age must not exceed thirty. Association with or experience in transport, especially railways, essential.—Reply, giving details of education and experience, to Box 891, ALLARDICE PALMER LIMITED, 4, Carmelite Street, E.C.4.

## Canadian National Railway Company

WELLINGTON GREY & BRUCE RAILWAY COMPANY, 7 PER CENT. BONDS.

AT the semi-annual Ballot for November, 1934, the following Wellington Grey & Bruce Railway Company 7 per cent. Bonds were drawn and will be paid at par at the offices of the Canadian National Railway Company in Montreal, Canada, or at Orient House, 42/5, New Broad Street, London, E.C.2, England, on the 1st January next, that is to say, Bonds numbered

74, 75, 132, 240, 353, 481, 703, 864, 1007, 1083, 1477, 1627, 2026, 2120, 2153, 2184, 2267, 2319, 2471, 2489, 2653, 2687, 2705, 2713, 2789, 2933, 2941, 2942, 3232, 3236, 3352, 3353, 3393, 3456, 3506, 3508, 3642, 3746, 3925, 4082, 4141, 4142, 4247, 4300, 4469, 4513, 4565, 4654, 4728, 4736, 4822, 4874, 4891, 4980.

In all £5,400 sterling.

Holders of these Bonds will take notice that the interest will cease after 1st January next.

A. H. CONEYBEARE,  
European Secretary and Treasurer.

London,  
3rd December, 1934.

## Canadian National Railway Company

WELLINGTON GREY & BRUCE RAILWAY COMPANY, 7 PER CENT. BONDS.

NOTICE IS HEREBY GIVEN that the estimated earnings of the Wellington Grey & Bruce Railway for the half-year ending 31st December, 1934, applicable to meet interest on the Bonds, will admit of the payment of £4 per £100 Bond, and that this payment will be applied as follows, viz.:—

22 7s. 6d. in final discharge of Coupon No. 104 due 1st July, 1922, and £1 12s. 6d. on account of Coupon No. 105 due 1st January, 1923, and will be made on and after 1st January next at the offices of the Canadian National Railway Company, Orient House, 42/5, New Broad Street, London, England.

The Coupons must be left three clear days for examination.

A. H. CONEYBEARE,

European Secretary and Treasurer.

London,  
3rd December, 1934.

## Questions in Parliament

## Level Crossings

Mr. Joel on November 29 asked the Minister of Transport the number of level crossings to whose elimination his Department had made any grants in the past five years, giving the names and the amounts in each case.

Mr. Hore-Belisha.—Works of this nature usually form part of larger improvement schemes, and it is not practicable to extract the actual cost of eliminating level crossings from the cost of the scheme of which it forms part. During the years 1930-34, Road Fund grants have been made to 26 schemes for eliminating or avoiding level crossings.

Lt.-Comdr. Tufnell asked the Minister of Transport whether, in view of the fatal accident which occurred that week at the level crossing at Wormley, in which both the engine driver and fireman of the train involved lost their lives, he would take early steps to expedite the programme for abolishing level crossings throughout the country.

Mr. Hore-Belisha.—I am informed that the crossing on which this accident occurred is not a public road, but part of a private farm track. In order to expedite the abolition of level crossings

on important roads, I am ready to make from the Road Fund grants of 75 per cent. of the cost of constructing bridges in their stead, but the initiation of any individual scheme rests of course with the responsible highway authority.

L.N.E.R. Musical Society  
Bohemian Concert

The L.N.E.R. Musical Society opened its season with a Bohemian Concert and Ladies' Night at Hamilton Hall, E.C.2, on November 30. The chair was taken by Miss Gray (daughter of Mr. A. R. Gray, Director, L.N.E.R.) who was presented with a mallet by the society. Proposing a vote of thanks to Miss Gray, Mr. William Whitelaw (Chairman, L.N.E.R.) said that although he hoped that he had himself infused a little Scottish enthusiasm into the society in the past, this was the first time he had been able to produce a visitor from Scotland to occupy the chair. Miss Gray was an Aberdonian, and by the time she returned home she would have travelled something over a thousand miles for the purpose of honouring the society and gracing its

concert. In reply, Miss Gray expressed her pleasure at being invited to preside at the function and wished the society, which had been fortunate in having Mr. Whitelaw as its President ever since the formation of the L.N.E.R. group eleven years ago, continued success in the future. The programme of music was given by the full orchestra of the society and the London section of the Male Voice Choir. Soloists were Miss Muriel Gale and Mr. Victor Hely-Hutchinson (pianoforte). Mr. Frederick Stock and Mr. Leslie Woodgate (by courtesy of the B.B.C.) conducted. The following past and present L.N.E.R. Directors, officers and officials were among the guests:—

Sir Charles A. Batho, Mr. A. R. Gray (Directors); Messrs. R. Brown (Assistant to Chief Accountant), A. T. Burton (Secretary of Funds), H. T. Davis (late District Storekeeper, Stratford), F. Downes (Signal and Telegraph Engineer), P. J. Dowsett (Assistant Secretary), H. G. Drury (late Superintendent, G.E.R.), R. Gardiner (Assistant Superintendent, Eastern Section), C. W. L. Glaze (late District Mechanical Engineer, Stratford), E. L. Hawkins (Assistant Engineer, Maintenance), W. H. Hyde (late General Manager, G.E.R.), Colonel H. H. Mauldin (Superintendent, Eastern Section); Messrs. J. E. Ryan (Perels Superintendent, Southern Area), Percy Syder (London City Manager), G. F. Thurston (Divisional General Manager, Southern Area), Alex. Wilson (late Divisional General Manager, Southern Area), A. P. Parker (late Assistant to General Manager, G.E.R.).

## PARLIAMENTARY NOTICES

In Parliament.—Session 1934-35.

### Great Western Railway

**NOTICE IS HEREBY GIVEN** that application has been made to Parliament in the present Session by the Great Western Railway Company for an Act under the above name or short title intitled "A Bill for conferring further powers upon the Great Western Railway Company and for other purposes."

A Notice containing a concise summary of the purposes of the intended Act has been or will be published in "The Times" newspaper of the 30th November and 7th December, 1934.

On and after the 4th day of December next a copy of the Bill may be inspected and copies thereof obtained at the price of 2s. for each copy at the office of the undersigned Solicitor, and at the office of the Station Master at the Company's stations at Swansea and Carmarthen respectively.

Dated this 29th day of November, 1934.

A. G. HUBBARD,  
Great Western Railway Station,  
Paddington, W.2.  
Solicitor.

H. F. A. HOSKINS,  
1, The Abbey Garden,  
Westminster, S.W.1.  
Parliamentary Agent.

In Parliament.—Session 1934-35.

### London Midland & Scottish Railway

**NOTICE IS HEREBY GIVEN** that application has been made to Parliament in the present Session by the London Midland & Scottish Railway Company (hereinafter referred to as "the Company") for leave to bring in a Bill under the above name or short title.

A Notice containing a concise summary of the purposes of the Bill has been or will be published in full in "The Times" newspaper on the 1st and 8th days of December, 1934.

On and after the 4th day of December, 1934, a copy of the Bill may be inspected and copies thereof obtained at a price not exceeding two shillings and sixpence for each copy at the offices of Mr. W. O. Hickson, Divisional Solicitor, Hunts Bank, Manchester, and Messrs. Beale & Company, 12, Newhall Street, Birmingham, at the Station-master's Office at the following railway stations of the Company, viz.:—Barking, Watford Junction, Oldbury and Bromford Lane, Stafford, Tewkesbury, Stockport and Market Harborough, and also at the Offices of the undermentioned Chief Legal Adviser and Parliamentary Agents.

**AND NOTICE IS HEREBY GIVEN** that on or before the 20th day of November, 1934, plans of the lands which may be taken compulsorily with a book of reference to such plans were deposited for public inspection as follows:—As regards the lands in the County of Essex with the Clerk of the County Council at his office at Chelmsford, as regards the lands in the County of Hertford with the Clerk of the County Council at his office at Hertford, as regards the lands in the County of Warwick with the Clerk of the County Council at his office at Warwick, as regards the lands in the County of Worcester with the Clerk of the County

Council at his office at Worcester, as regards the lands in the County of Stafford with the Clerk of the County Council at his office at Stafford, as regards the lands in the County of Gloucester with the Clerk of the County Council at his office at Gloucester, as regards the lands in the County of Chester with the Clerk of the County Council at his office at Chester, and as regards the lands in the County of Lancaster with the Clerk of the County Council at his office at Preston. And that copies of so much of the said plans and book of reference as relates to each of the several areas hereinafter mentioned in which the lands are situate were on or before the said 20th day of November, 1934, deposited as follows:—As relates to any county borough or to any non-county borough with the Town Clerk of such borough at his office; as relates to any urban district not being a borough or to any rural district with the Clerk of the District Council of such district at his office; as relates to any parish comprised in a rural district with the Clerk of the Parish Council at his office.

Dated this 29th day of November, 1934.

H. L. THORNHILL,  
10, Great College Street,  
Westminster, S.W.1.  
Chief Legal Adviser.

BEALE & Co.,  
16, Great George Street,  
Westminster, S.W.1.  
Parliamentary Agents.

In Parliament.—Session 1934-35.

### London & North Eastern Railway

**NOTICE IS HEREBY GIVEN** that application has been made to Parliament in the present Session by the London & North Eastern Railway Company for an Act under the above name or short title intitled "A Bill to make provision as to the tolls and charges leviable by the London & North Eastern Railway Company on their canals; to extinguish the navigation rights on the Grantham Canal of the said Company; to extend the time for the completion of certain works; and for other purposes."

A Notice containing a concise summary of the purposes of the intended Act has been or will be published in "The Times" newspaper of the 1st and 8th December, 1934.

On and after the fourth day of December, 1934, a copy of the Bill may be inspected and copies thereof obtained at a price not exceeding two shillings for each copy at the offices of the undersigned and at the Stationmaster's office at the following railway stations of the Company, viz.:—Tottenham, Chelmsford, Ipswich and York.

Dated this 6th day of December, 1934.

I. BUCHANAN PRITCHARD,  
King's Cross Station, N.1.  
Chief Legal Adviser.

H. R. CRIPPS,  
4, Cowley Street, Westminster, S.W.1,  
Chief Assistant Solicitor.

SHERWOOD & Co.,  
22, Abingdon Street, Westminster, S.W.1,  
Parliamentary Agents.

Scottish Office.—November, 1934.

Private Legislation Procedure (Scotland) Acts, 1899 and 1933.

### London Midland & Scottish Railway

**NOTICE IS HEREBY GIVEN** that application has been made in the month of November, 1934, to the Secretary of State by the London Midland & Scottish Railway Company for a PROVISIONAL ORDER (hereinafter referred to as "the Order") under the Private Legislation Procedure (Scotland) Acts, 1899 and 1933 under the above short title and intitled "(Draft) Provisional Order to extend the time for the completion of certain authorised Railways and Works and for the purchase of lands by the London Midland & Scottish Railway Company; and as to canal charges; and for other purposes."

The names and dates of publication of the newspapers in which the full notice for the Order has been or will be published are as follows:—

"The Times," London, of the 1st and 8th December, 1934,  
"The Glasgow Herald" of the 1st and 8th December, 1934.

On and after the 4th day of December, 1934, a copy of the Order may be inspected and copies thereof obtained at a price of 1s. per copy at the Station-master's Office at the following railway stations of the Company, viz.:—Beaumont, Drumlithie, Dundee East, Inverness and Perth, and also at the offices of the undersigned Solicitors and Parliamentary Agents.

Dated this 30th day of November, 1934.

JAMES WILSON,  
302, Buchanan Street,  
Glasgow.  
Solicitor (Scotland).

H. L. THORNHILL,  
10, Great College Street,  
Westminster, S.W.1.  
Chief Legal Adviser.

BEALE & Co.,  
16, Great George Street,  
Westminster, S.W.1.  
Parliamentary Agents.

In Parliament.—Session 1934-35.

### Southern Railway

**NOTICE IS HEREBY GIVEN** that application has been made to Parliament in the present Session by the Southern Railway Company for an Act under the above name or short title intitled "A Bill to empower the Southern Railway Company to construct Works and acquire Lands; to extend the time for the completion of certain Works and the compulsory purchase of certain Lands; and for other purposes."

A Notice containing a concise summary of the purposes of the intended Act has been or will be published in "The Times" Newspaper of the 1st and 8th December, 1934.

On and after the 4th day of December, 1934, a copy of the Bill may be inspected and copies thereof obtained at a price not exceeding four shillings for each copy, at the offices of the undermentioned Solicitor and Parliamentary Agents and at the Stationmaster's Office at the following railway stations of the Company, viz.:—Guildford, Maidstone (West), Lewes, Chichester, Winchester, and Twickenham.

And notice is hereby also given that on or before the twentieth day of November,

ber, 1934, plans and sections relating to the said intended works and plans of all lands which may be taken or used compulsorily with a book of reference to such plans were deposited for public inspection as follows (that is to say):—

As regards works and lands in the County of Surrey with the Clerk of the County Council of that County at his office at Kingston-upon-Thames; as regards works and lands in the County of East Sussex with the Clerk of the County Council of that County at his office at Lewes.

And that copies of so much of the said plans, sections and book of reference as relates to each of the several areas hereinafter mentioned in or through which the intended works are proposed to be made or lands are situate were on or before the said twentieth day of November deposited for public inspection as follows (that is to say):—

As relates to the borough of Lydd with the Town Clerk of that borough at his office, as relates to any urban district (not being a borough) or to

any rural district with the Clerk of the district council of such district at his office; and as relates to any parish comprised in a rural district with the Clerk of the parish council at his office, or if he have no office at his residence, or if there be no Clerk, with the Chairman of the parish council at his residence.

Dated this 6th day of December, 1934.

WM. BISHOP,  
Waterloo Station,  
London, S.E.1.  
Solicitor.  
SHERWOOD & Co.,  
22, Abingdon Street, Westminster, S.W.1.  
Parliamentary Agents.

### Forthcoming Meetings

Dec. 12 (Wed.).—**Mexican Railway Co. Ltd.** (General), Winchester House, Old Broad Street, E.C.2, at 2.30 p.m.

Dec. 14 (Fri.).—**British Railway Stockholders' Union Limited** (Annual), Central Hall, Westminster, S.W., at 11 a.m.

### British and Irish Railways Stocks and Shares

Stocks	Highest 1933	Lowest 1933	Prices	
			Dec. 5, 1934	Rise/Fall
<b>G.W.R.</b>				
Cons. Ord. ...	55½	31	51½	+½
5% Con. Prefce. ...	109½	69½	115½	+½
5% Red. Pref. (1950) ...	109½	87½	111½	+½
4% Deb. ...	108½	99½	116	+½
4½% Deb. ...	108	100½	117½	—
4½% Deb. ...	116	106	126½	—
5% Deb. ...	128	117½	133½	—
2½% Deb. ...	65	60	72½	—
5% Rt. Charge ...	124	111½	132½	—
5% Cons. Guar. ...	122	103	130½	—
<b>L.M.S.R.</b>				
Ord. ...	297½	121½	22	+½
4% Prefce. (1923) ...	51	17	50½	+½
4% Prefce. ...	72	33½	86	+½
5% Red. Pref. (1955) ...	93	47½	104*	+½
4% Deb. ...	103½	84½	108½*	+½
5% Red. Deb. (1952) ...	114	105	116½	—
4% Guar. ...	97½	68½	105	—
<b>L.N.E.R.</b>				
5% Pref. Ord. ...	22½	7¾	15¾	—
Def. Ord. ...	10¾	4½	7½	—½
4% First Prefce. ...	65½	19½	70	+½
4% Second Prefce. ...	40½	12½	32	+½
5% Red. Pref. (1955) ...	83½	27	89½	—
4% First Guar. ...	94½	58½	101	—½
4% Second Guar. ...	89½	48	95	—½
3% Deb. ...	77	60½	84*	—½
4% Deb. ...	102½	80	108*	+½
5% Red. Deb. (1947) ...	112	102½	116	—
4½% Sinking Fund Red. Deb. ...	107½	98½	109½*	+½
<b>SOUTHERN</b>				
Pref. Ord. ...	71	27½	79	—
Def. Ord. ...	24½	9½	23½	—
5% Prefce. ...	107½	74	116	—
5% Red. Pref. (1964) ...	107½	78½	114½	—
5% Guar. Prefce. ...	124½	102½	131½	—
5% Red. Guar. Pref. (1957) ...	115½	103½	118	—
4% Deb. ...	107½	96½	113½*	+½
5% Deb. ...	126½	114½	131½*	+½
4% Red. Deb. ...	107½	100	111½*	+½
<b>1962-67</b>				
<b>BELFAST &amp; C.D.</b>				
Ord. ...	6	5	—	—
<b>FORTH BRIDGE</b>				
4% Deb. ...	99½	95½	111½	—
4% Guar. ...	98½	94	110½	—
<b>G. NORTHERN (IRELAND)</b>				
Ord. ...	7½	3½	7	—
<b>G. SOUTHERN (IRELAND)</b>				
Ord. ...	28	16	16½	—
Prefce. ...	24	12½	14½	—½
Guar. ...	42	16½	43	+½
Deb. ...	60	30½	66	+½
<b>L.P.T.B.</b>				
4½% "A" ...	117½	112	123½*	+½
5% "A" ...	127½	119½	132½*	+½
4½% "T.F.A." ...	111½	106	111½*	+½
5% "B" ...	122½	114	127½*	+½
5% "C" ...	86½	74½	93	+½
<b>MERSEY</b>				
Ord. ...	16½	5	9	—
4% Perp. Deb. ...	83	63½	92½	—
3% Perp. Deb. ...	62	51	67½	—
3% Perp. Prefce. ...	50½	27	48½	+½

\* ex dividend

### British and Irish Traffic Returns

GREAT BRITAIN	Totals for 48th Week			Totals to Date.		
	1934	1933	Inc. or Dec.	1934	1933	Inc. or Dec.
<b>L.M.S.R. (6,941½ mls.)</b>						
Passenger-train traffic...	384,000	369,000	+ 15,000	22,806,000	22,427,000	+ 379,000
Merchandise, &c. ...	469,000	467,000	+ 2,000	21,454,000	20,122,000	+ 1,332,000
Coal and coke ...	265,000	276,000	— 11,000	10,871,000	10,435,000	+ 436,000
Goods-train traffic ...	734,000	743,000	— 9,000	32,325,000	30,557,000	+ 1,768,000
Total receipts ...	1,118,000	1,112,000	+ 6,000	55,131,000	52,984,000	+ 2,147,000
<b>L.N.E.R. (6,339 mls.)</b>						
Passenger-train traffic...	256,000	254,000	+ 2,000	14,778,000	14,538,000	+ 240,000
Merchandise, &c. ...	377,000	361,000	+ 16,000	15,191,000	14,200,000	+ 991,000
Coal and coke ...	257,000	250,000	+ 7,000	10,905,000	10,089,000	+ 816,000
Goods-train traffic ...	634,000	611,000	+ 23,000	26,096,000	24,289,000	+ 1,807,000
Total receipts ...	890,000	865,000	+ 25,000	40,874,000	38,827,000	+ 2,047,000
<b>G.W.R. (3,750½ mls.)</b>						
Passenger-train traffic...	168,000	163,000	+ 5,000	9,685,000	9,662,000	+ 23,000
Merchandise, &c. ...	188,000	187,000	+ 1,000	8,640,000	8,144,000	+ 496,000
Coal and coke ...	108,000	106,000	+ 2,000	4,745,000	4,668,000	+ 77,000
Goods-train traffic ...	296,000	293,000	+ 3,000	13,385,000	12,812,000	+ 573,000
Total receipts ...	464,000	456,000	+ 8,000	23,070,000	22,474,000	+ 596,000
<b>S.R. (2,176 mls.)</b>						
Passenger-train traffic...	244,000	230,000	+ 14,000	13,985,000	13,758,000	+ 227,000
Merchandise, &c. ...	71,500	70,000	+ 1,500	3,067,500	2,952,500	+ 115,000
Coal and coke ...	41,500	41,000	+ 500	1,483,500	1,410,500	+ 73,000
Goods-train traffic ...	113,000	111,000	+ 2,000	4,551,000	4,363,000	+ 188,000
Total receipts ...	357,000	341,000	+ 16,000	18,536,000	18,121,000	+ 415,000
<b>Liverpool Overhead (6½ mls.)</b>	1,048	1,075	— 27	54,576	54,345	+ 231
<b>Mersey (4½ mls.)</b>	4,239	4,234	+ 5	194,784	191,140	+ 3,644
* London Passenger Transport Board ...	556,400	511,900	+ 44,500	11,678,000	11,495,500	+ 182,500
<b>IRELAND</b>						
<b>Belfast &amp; C.D. (80 mls.)</b>						
pass. ...	1,798	1,701	+ 97	119,984	121,328	— 1,344
goods ...	611	605	+ 6	24,975	25,127	— 152
total ...	2,409	2,306	+ 103	144,959	146,455	— 1,496
<b>Great Northern (562 mls.)</b>						
pass. ...	7,700	6,750	+ 950	474,900	372,000	+ 102,900
goods ...	11,100	10,850	+ 250	414,150	340,900	+ 73,250
total ...	18,800	17,600	+ 1,200	889,050	712,900	+ 176,150
<b>Great Southern (2,158 mls.)</b>						
pass. ...	19,453	18,780	+ 673	1,144,615	1,127,945	+ 16,670
goods ...	41,581	36,634	+ 4,947	1,596,615	1,504,693	+ 91,922
total ...	61,034	55,414	+ 5,620	2,741,230	2,632,638	+ 108,592

\* 22nd week, the receipts for which include those undertakings not absorbed by the L.P.T.B. in the corresponding period last year; last year's figures are, however, adjusted for comparative purposes.



## CONTRACTS AND TENDERS

The Sentinel Waggon Works Limited has received a repeat order from the Tottenham & District Gas Co. Ltd. for one 4 ft. 8½ in.-gauge Sentinel patent 0-4-0 type steam shunting tank locomotive of 100 h.p., and adapted to burn coke as fuel.

Loudon Bros. Limited has received an order from the Great Western Railway for a rail planing machine for Swindon works.

H. Morris Limited has received an order from the Great Western Railway for a 2½-ton petrol-electric mobile crane for Swindon works.

D. Wickham & Co. Ltd. has received an order from the Buenos Ayres Midland Railway for one motor gang trolley for the transport of permanent way gangs.

The Vaughan Crane Co. Ltd. has received an order for a crane block at a total price of £171 from the Egyptian State Railways Administration.

William C. Jones Limited has received an order from the Egyptian State Railways Administration for 320 metric tons of cotton waste at a total cost of £3,840 f.o.b. Liverpool.

Dortmunder Bruckenbau C. H. Jucho has received an order from the Egyptian State Railways for five railway bridge superstructures comprising approximately 160 tons of rolled steel and 12 tons of cast steel, at an estimated price of L.E. 6,966·300 mills.

The Metal Traders Co. Ltd. has received an order from the Egyptian State Railways Administration for 27 metric tons of tin ingots at a total cost of £6,172 f.o.b. London based on settlement price of £288 15s. a ton of tin. (Ref. E.S.R. 692.)

Fried Krupp A.-G. has received an order from the Egyptian State Railways Administration through J. F. Melling for a quantity of flat and ribbed bars to a total value of £310 10s. f.o.b. Rotterdam. (Ref. E.S.R. 7.78.)

The Skoda Works Limited has received an order from the Egyptian State Railways Administration for carriage and wagons tyres to a total value of £2,295 f.o.b. Trieste/Hamburg. (Ref. E.S.R. 21.215.)

The Associated Equipment Co. Ltd. has received repeated orders from the Devon General Omnibus & Touring Co. Ltd. for two oil-engined Regent double-decked passenger vehicles and two Ranger single-decked passenger vehicles.

Leyland Motors Limited has received the following orders from railway and railway-associated road operators:—

Great Northern Railway of Ireland: 10 oil-engined Lions.

Greenock Motor Services Company: four oil-engined Titans.

W. Alexander & Sons Ltd.: 75 oil-engined Tigers.

Stewarts & Lloyds Limited has received an order for 3,725 solid drawn

steel boiler tubes and 475 solid drawn black steel superheater smoke tubes from the Buenos Ayres Great Southern Railway.

Jessop & Co. Ltd. has received an order from the Chief Engineer, Eastern Bengal Railway, for steel bridge girder spans for a bridge over the municipal sewer at Beliaghata.

Samuel Osborn (India) Co. Ltd. has received an order from the Indian Stores Department for outside buffer cases at Rs. 10-9-9 each free delivery East Indian Railway Stores, Howrah.

Alfred Herbert (India) Limited has received an order from the East Indian Railway for one Herbert No. 20 combination turret lathe complete with electrical equipment and spares at a total price of Rs. 23,963 f.o.r. Howrah.

Wright, Pinhorn & Partners Limited has received orders from the Indian Stores Department for 200 Mannesmann seamless steel tubular poles, and 230 galvanised iron caps at total prices respectively of Rs. 13,561 and Rs. 311 f.o.r. Verka.

The South Indian Railway has placed orders for equipment and materials to be supplied to the inspection of Messrs. Robt. White & Partners, as follows:—Clyde Rubber Works Limited: India-rubber buffer springs; Murex Welding Processes Limited: Electrodes; Colthurst & Harding Limited: Zinc white paint; and Macintosh Cable Co. Ltd.: Electric cables.

The Government of Mysore has placed orders for machine tools and equipment as follows:—

Alfred Herbert (India) Limited: One 15-cwt. pneumatic power hammer, Massey clear-space type and one high-speed slotting machine.

W. H. Brady & Co. Ltd.: Four 8-in. centre gap bed sliding surfacing and screw cutting lathes; two 10½ in. centre by 12 ft. sliding, surfacing and screw cutting lathes; one Jones & Shipman 20-in. drilling machine; and one Jackman & Company's Millet type core oven.

Burn & Co. Ltd.: One Craig & Donald finishing press.

Associated British Machine Tool Makers Limited: One Luke & Spencer dry grinding machine.

The Government of Mysore has placed orders for electric lamps with the International General Electric Company (Mazda lamps); the Associated Electrical Industries Limited (Mazda lamps); the General Electric Co. Ltd. (Osram lamps); Vernon & Co. (Phillips lamps); and La Claire Electric Lamps Corporation (Claire lamps).

W. & T. Avery Limited has received an order from the Buenos Ayres Western Railway for one No. 137 Avery self-contained motor lorry weighbridge of 25,000 kg. capacity and 24 ft. by 10 ft. platform.

The Swedish State Railways Administration has bought 23,000 tons of British coal, comprising 8,000 tons of Horden engine coal, at a price of 18s. 11½d. a ton, 11,000 tons of Maude engine coal at 16s. 11d., and 4,000 tons of Horden special bunker coal at 19s. 11d.

Tenders are invited by the Chief Controller of Stores, Indian Stores Department (Engineering Section), New

Delhi, receivable by January 7, for a quantity of train lighting dynamos and switchgear for the Eastern Bengal Railway.

The Argentine Department of Navigation and Ports is calling for tenders, to be presented in Buenos Aires by December 12, for the supply and delivery of the following track material:—1,800 metric tons of Vignole type steel rails, 37 kg. per metre in lengths of 10 metres; 5,400 pairs of fishplates for the above rails; 10,000 kg. of bolts for fishplates, and 70,000 kg. of dogspikes. Firms desirous of offering material of United Kingdom manufacture can obtain the further details of this call for tenders upon application to the Department of Overseas Trade.

## Forthcoming Events

Dec. 7 (Fri.).—Institute of Transport (Nottingham Graduate), at Guildhall, 7 p.m. "Railway Cartage Services," by Mr. G. G. Goodings.

Railway Students' Association (Edinburgh), at Gould Hall, St. Andrew Square, 7.30 p.m. "L.N.E.R. Continental Services," by Mr. A. L. Gibson.

Dec. 8 (Sat.).—Stephenson Locomotive Society, at King's Cross Station, London, 3 p.m. Annual General Meeting. 6.30 p.m., at Midland Grand Hotel, Annual Dinner.

L.N.E.R. (Great Central) Lecture and Debating Society, at University College, Shakespear Street, Nottingham, 4.30 p.m. "Road Motor Developments in the North-Eastern Area, L.N.E.R., during 1934," by Mr. A. A. Harrison.

Dec. 10 (Mon.).—G.W.R. (Birmingham) Lecture and Debating Society, at Great Western Hotel, Snow Hill Station, 6.30 p.m. "The Southern Railway," by Mr. J. B. Elliot.

Dec. 11 (Tues.).—Institute of Transport (Birmingham), at Queen's Hotel, 6 p.m. "Internal Air Transport Developments in Great Britain," by Mr. S. C. Warren-Wren.

Dec. 12 (Wed.).—Institution of Civil Engineers, Great George Street, London, S.W.1, 6 p.m. "Modern Developments in Variable Transmission Gears," by Mr. H. S. Hele-Shaw.

Institution of Railway Signal Engineers, at Institution of Electrical Engineers, Savoy Place, London, W.C.2, 6 p.m. "Some Developments in Advance Section Signalling," by Mr. S. W. Spendlove.

L.N.E.R. (Darlington) Lecture and Debating Society, at North Road Inst., 7.20 p.m. "Permanent Way Renewal Work," by Mr. L. W. Brown.

Permanent Way Institution (London), in Staff Dining Room, Waterloo Station. "Ten Years of Progress in Permanent Way Practice Abroad, 1924-33," by Mr. C. E. R. Sherrington.

Dec. 13 (Thurs.).—G.W.R. (London) Lecture and Debating Society, in General Meeting Room, Paddington Station, 5.45 p.m. Debate: "That the Cult of Efficiency is a Menace to the Best Traditions of our Civilisation." Affirmative: Bank of England Debating Society. Negative: G.W.R. (London) Debating Society.

Institution of Locomotive Engineers (London), at Inst. of Mechanical Engineers, Storey's Gate, S.W.1, 6 p.m. Informal Meeting.

Dec. 14 (Fri.).—Institute of Transport (Leeds Graduate), at Leeds Church Inst., Albion Place, 7 p.m. "Recent Developments in Short Distance Passenger Transport," by Mr. F. B. Harrison.

Institute of Transport (Newcastle), at Royal Station Hotel, 7.30 p.m. "Education for the Road Passenger Transport Industry," by Mr. E. R. L. Fitzpayne.

Dec. 15 (Sat.).—L.N.E.R. Musical Society, at Queen's Hall, Langham Place, London, W.1, 8 p.m. Carol Concert.

## THE MONTH'S RAILWAY LAW

### Work in the Courts

Numerous letters in the press testify to the call for more judges. The position is that until the number of puisne judges falls below fifteen the Lord Chancellor cannot create new judges on his own responsibility. There must be an address from both Houses of Parliament. Parliament did not meet until the Law Term was well advanced, with the result that for some weeks several of the Courts which should have been dealing with ordinary King's Bench work were empty. There were in fact sixteen judges in addition to the Lord Chancellor. The truth is that the Courts to-day are undermanned, the number of judges being the same as it was in 1864 at the time the Judicature Act was first introduced, whereas the population and the corresponding amount of work has largely increased. The Lord Chancellor has now made two popular appointments to the Bench in Mr. Singleton, K.C., and Mr. Porter, K.C.

Cases in the Appeal Court this term include *Radley v. London Midland & Scottish Railway Company*, in which the company is appealing from a verdict and judgment in a case tried by Mr. Justice Goddard and a special jury. The appeal of the railway company in *North Riding of Yorkshire County Council v. London & North Eastern Railway Company*, from a decision of Mr. Justice Luxmoore, was dismissed.

In the special jury list there is a claim in *Barnwell v. Buenos Ayres & Pacific Railway Company* for damages for wrongful dismissal. In the non-jury list is *Ruckwood v. London & North Eastern Railway Company* and *Southern Railway Company v. Boots Pure Drug Company Limited*, an action for indemnity, in which James Wilkinson & Son Ltd. appear as third party.

### Defective Packing

Carriers of goods as well as traders so often consult their legal advisers as to the responsibility caused by bad packing that a reminder of their respective rights is not out of place in these columns. The old common law rule was that the carrier was liable for damage from bad packing if he accepted the goods without objection; but that rule only applied where the defect was obvious. A carrier is certainly entitled to refuse goods tendered for carriage without proper protection (*London & North Western Railway Company v. Hudson*, 1920, A.C. 324). If he does accept them and during transit the packing proves defective, it is the duty of the carrier to do his best to minimise the damage. In the case of railway companies the Standard Conditions (A.17 and B.701) exempt them from liability for loss, damage or delay caused by "insufficient or improper packing." Even

when goods are sent at company's risk the company is not liable where the merchandise is sent in trucks, and the loss, &c., arises from defects in trucks or sheets not provided by the company, or upon proof that the loss was not due to any negligence of the company and its servants (A.18). Similarly the company avoids liability if it is shown that the loss would not have arisen but for faulty loading or covering on the part of the sender. At owner's risk the same exemption appears, but it would seem that the sender cannot here be heard to say that if the loading or covering of the goods was faulty it was done according to the company's directions.

In the case of "damageable goods not properly protected by packing," the company is only liable upon proof (E.3) that there was wilful misconduct on the part of the company's servants, or that the loss or damage would have appeared in any case, and that the company would have been liable had the "A" Conditions applied.

### Damage to Railway from Coal Mines

*London & North Eastern Railway Company v. Hardwick Colliery Co. Ltd.*  
*The Times*, October 16.

This case raised a new point under the Mines (Working Facilities & Support) Act 1923. That Act enabled mine owners with the approval of the Railway & Canal Commission to work mines underneath a railway if the Commission is satisfied that "it is expedient in the national interest." A certain area and a fixed distance from it is described in the Act as the "area of protection," and as to this the railway company can serve notice of objection upon the mine owner on the ground that it would be unsafe to work so far as the railway was concerned. If the mine owner works minerals under this area he is liable to contribute to the expenses incurred by the company and to make good damage caused to the railway or railway works by the working.

Nothing in the Act (section 85 (b), subs. 2) is to alter the rights to let down the surface so far as they are derived from a title belonging to the mineowner before the company acquired the surface interest. In the case of the Hardwick Colliery notice had been given by the mineowners to the railway company of intention to work the minerals under the area of protection and the company had not served counter notice. The dates of the relevant deeds are important. In 1893, 1895 and 1897, the railway company acquired the surface rights to the lands in question. The colliery company acquired the leases to work the minerals underneath the area in 1916 and 1920. Their predecessors in title

had held earlier leases for many years before the railway company acquired the surface rights. These were surrendered by the colliery in 1920 when the new leases were granted to them. All these leases gave the colliery the right to let down the surface. The defendants claimed that as they or their predecessors in title had rights to minerals prior to the railway company, they were not liable to pay for damage to the railway and were protected by section 85 (b), subs. 2, of the Act of 1923.

### The Right to Compensation

Mr. Justice Farwell, however, construed the above section in a manner favourable to the railway company's claim. In order that the mine owner may avail himself of the relief afforded by the section he has to show that by a title granted to him antecedent to the acquisition of the surface by the company he had a right to let down the surface. His Lordship came to the conclusion that it was not enough for the mine-owner to show that the person from whom he derived title had this right. The result is a peculiar one, because the mine-owners having surrendered their leases and taken fresh leases in 1916-1920, took themselves out of the protection which they would otherwise have got from section 85 (b), subs. 2. There was, however, no doubt that the working of the minerals under the protected area had resulted in damage to the railway and the mine-owners were therefore liable under Sect. 79 (a), subs. 1, to pay a sum of about £230 to the railway company as a contribution towards making good the damage.

The method of assessing the amount of the contribution is explained in section 15 of the Act, and in default of agreement it is to be determined by arbitration. This is, so far as we are aware, the first time that this point in the section of the Act of 1923 has received judicial construction.

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**L.N.E.R. RECORD RUN.**—Details of the remarkable run made by the L.N.E.R. 4-6-2 type express engine No. 4472, *Flying Scotsman*, on Friday, November 30, in hauling a special train from London to Leeds and back are given in detail on pages 951-952 of this issue. The locomotive, in common with the others of the same class, is fitted with Wakefield mechanical lubricators for the valves, cylinders, and coupled-wheel axleboxes. The lubricants used were Wakefield super-heater oil for the valves and cylinders, and Wakefield express engine oil for the rotating parts. The engine ran cool throughout. The average running speed for the complete trip of 372 miles was 72½ m.p.h., and in the course of the journey 250 miles were covered at an average speed of 80 m.p.h. Such conditions of working necessarily demand the most efficient system of lubrication obtainable.

## Railway Share Market

In the stock and share markets increased interest has been shown in Home Railway stocks. The decision on Thursday of last week of the London Midland & Scottish to pay on January 1 the dividend on the 5 per cent. redeemable preference stock in full means also full payment on the first preference stock which ranks *pari passu*. It has had a favourable influence not only on the company's own stocks but has caused attention to be directed to the position of the corresponding first preference and 5 per cent. redeemable preference stocks of the London & North Eastern.

Payment of the full dividend on these stocks is not so confidently regarded, but it stimulates the investor who looks ahead to make a moderate purchase of the stocks on the basis of a partial payment

of the dividend for 1934 and a prospective full payment for 1935. On the latter basis the yield on the two preference stocks is over 5½ per cent. This week's traffic receipts, which included the big movement of passengers to London for the Royal Wedding, proved to be fully discounted, but the announcement regarding the revision of fares by the companies was very favourably received, and the prospective value of this bid for increased traffic has not gone unnoticed in the Stock Exchange. London Transport Board "C" stock has made further advance. There is an impression that the Board's income from the omnibus assets acquired from Thomas Tilling will exceed the amount of interest to be paid on the stocks awarded to that company under the arbitration proceedings. Whilst this estimate would assist in the payment of the "C" stock dividend more import-

ance is probably attached to the actual earning value of the stock in the course of the next few years. In foreign railways there was appreciation in the debenture stocks of Argentine railways. Cordoba Central first debenture stock has been active for special reasons. Speculative interest in the outcome of conversations with the Argentine authorities regarding acquisition of the line appears to have been stimulated.

On the first two days of this week there were over 50 bargains recorded in the stock. The number of bargains actually effected was put up to mid-week at over a hundred and the turnover of stock at about £80,000. This is not a large amount when markets are busy, but it reflects the growth of interest in the future of this particular debenture stock, which has a prior charge on the assets of the company. Last year it was once at 15.

### Traffic Table of Overseas and Foreign Railways Publishing Weekly Returns

Railways	Miles open 1933-34	Week Ending	Traffic for Week		No. of Week	Aggregate Traffic to Date			Shares or Stock	Prices					
			Total this year	Inc. or Dec. compared with 1933		Totals		Increase or Decrease		Highest 1933	Lowest 1933	Dec. 5, 1934	Yield (%) (Note)		
						This Year	Last Year								
South & Central America.															
Antofagasta (Chili) & Bolivia	830	2.12.34	16,220	+	£ 730	48	£ 713,050	£ 524,270	+	£ 188,780	Ord. Stk.	26	115½	23	Nil
Argentine North Eastern ..	753	1.12.34	7,304	+	828	22	166,093	208,464	+	42,371	Ord. Stk.	14½	5	9	Nil
Argentine Transandine ..	111			—	—				—	A. Deb.	55	40	50½	8	Nil
Bolivar .. .. .	170	Oct., 1934	5,600	+	750	43	59,950	62,050	—	2,100	6 p.c. Db.	10	5	10	Nil
Brazil .. .. .				—	—				—	Bonds.	15	11	13	30½	Nil
Buenos Ayres & Pacific ..	2,806	1.12.34	70,760	—	6,513	22	1,510,040	1,803,761	—	293,721	Ord. Stk.	26	97½	10	Nil
Buenos Ayre. Central ..	190	11.11.34	\$108,700	+	\$2,300	19	\$2,430,800	\$2,255,800	+	\$175,970	Mt. Db.	30	10	23	Nil
Buenos Ayres Gt. Southern ..	5,085	1.12.34	115,789	—	38,756	22	2,645,570	3,400,546	—	754,976	Ord. Stk.	44½	21½	24	Nil
Buenos Ayres Western ..	1,930	1.12.34	44,444	—	6,834	22	903,694	1,174,569	—	270,875	Ord. Stk.	34½	15	22	Nil
Central Argentine .. ..	3,700	1.12.34	99,769	—	38,477	22	2,561,227	3,010,008	—	448,781	"	28½	15	15	Nil
Do. .. .. .				—	—				—	"	18	10	9	Nil	
Cent. Uruguay of M. Video ..	273	1.12.34	19,981	+	1,484	22	349,650	352,641	—	2,991	Ord. Stk.	20	8	10½	Nil
Do. Eastern Extn. ..	311	1.12.34	5,131	+	1,066	22	71,205	66,609	+	4,596	"	—	—	—	—
Do. Northern Extn. ..	185	1.12.34	1,942	—	198	22	38,478	37,877	+	601	"	—	—	—	—
Do. Western Extn. ..	211	1.12.34	1,575	+	282	22	31,680	31,053	+	627	"	—	—	—	—
Cordoba Central .. ..	1,218	1.12.34	27,490	—	5,040	22	665,430	881,380	—	215,950	Ord. Inc.	9½	2½	4½	Nil
Costa Rica .. .. .	188	Sept., 1934	16,684	—	1,648	9	49,839	64,775	—	14,936	Stk.	29	20	30	61½
Dorada .. .. .	70	Oct., 1934	11,790	+	3,500	43	102,400	78,400	—	24,000	1 Mt. Db.	76½	68½	102½	5½
Entre Rios .. .. .	810	1.12.34	14,269	+	2,146	22	253,832	288,928	—	35,096	Ord. Stk.	26½	9	13	Nil
Great Western of Brazil ..	1,082	1.12.34	14,800	+	1,200	48	422,800	484,306	—	61,500	Ord. Sh.	23½	12	5½	Nil
International of Cl. Amer. ..	794	Oct., 1934	\$306,149	+	\$28,040	43	\$3,946,054	\$3,778,077	+	\$167,977	"	—	—	—	—
Interoceanic of Mexico ..				—	—				—	1st Pref.	12	1½	1½	1½	Nil
La Guazira & Caracas ..	225½	Nov., 1934	3,085	+	585	47	39,150	52,270	—	13,120	Stk.	16	10	8½	Nil
Leopoldina .. .. .	1,918	1.12.34	24,392	+	3,075	48	1,225,132	1,182,375	+	42,757	Ord. Stk.	20½	10	8½	Nil
Mexican .. .. .	483	30.11.34	\$287,900	+	\$51,400	21	\$4,879,900	\$4,069,100	+	\$810,800	"	3	1½	2	Nil
Midland of Uruguay ..	319	Oct., 1934	12,938	+	3,321	17	38,789	34,516	+	4,273	"	2	1	1½	Nil
Nitrato .. .. .	401	30.11.34	19,662	+	1,402	47	230,367	127,235	+	103,132	Ord. Sh.	78½	11½	27½	Nil
Paraguay Central .. ..	274	1.12.34	4,680	+	1,560	22	99,380	72,760	+	26,620	Pr. Li. Stk.	72	49½	77½	7½
Peruvian Corporation ..	1,059	Nov., 1934	58,693	+	621	21	309,538	274,940	+	34,598	Pref.	15½	5	9	Nil
Salvador .. .. .	100	24.11.34	616,870	+	61,019	21	2,091,177	2,292,566	—	683,389	Pr. Li. Db.	70	66½	70	7½
San Paulo .. .. .	153½	25.11.34	34,083	+	4,683	47	1,398,586	1,414,498	—	15,912	Ord. Stk.	102	68	72	5½
Taitai .. .. .	164	Oct., 1934	2,300	+	605	17	9,205	7,088	+	2,117	Ord. Sh.	16½	2	11½	5½
United of Havana .. ..	1,365	1.12.34	16,589	+	1,456	22	362,138	282,076	+	80,062	Ord. Stk.	8	2	3	Nil
Uruguay Northern .. ..	73	Oct., 1934	1,132	—	70	17	4,444	4,431	+	13	Deb. Stk.	6	3½	5½	Nil
Canada.															
Canadian National .. ..	23,733	30.11.34	865,758	+	47,593	47	30,309,604	27,233,249	+	3,076,355	—	—	—	—	—
Canadian Northern .. ..				—	—				—	4 p.c.	60½	38	77½	55½	Nil
Grand Trunk .. .. .				—	—				—	Perp. Dbs.	99½	85	104	37½	Nil
Canadian Pacific .. ..	17,018	30.11.34	666,200	+	5,200	47	22,967,200	20,871,400	+	2,095,800	Ord. Stk.	22½	11	12	Nil
India.															
Assam Bengal .. .. .	1,329	3.11.34	27,825	—	1,347	31	831,608	716,101	+	115,507	Ord. Stk.	79	70	87½	37½
Baru Light .. .. .	202	10.11.34	1,710½	—	1,350	32	85,455	94,387	—	8,932	Ord. Sh.	101½	70	102½	57½
Bengal & North Western ..	2,112	10.11.34	39,216	—	10,394	6	238,094	255,440	—	17,346	Ord. Stk.	292	240	291½	5½
Bengal Doonars & Extension ..	161	10.11.34	3,371	—	701	32	95,154	94,103	+	1,051	"	127	119	125½	69½
Bengal-Nagpur .. .. .	3,269	3.11.34	117,525	+	7,252	31	3,398,640	3,125,268	+	273,372	"	97½	83½	103½	37½
Bombay, Baroda & Cl. India ..	3,072	24.11.34	168,825	+	16,200	34	5,046,000	4,828,050	+	217,950	"	112	107	112½	58½
Madras & South'n Mahratta ..	3,230	10.11.34	75,150	—	24,810	32	3,493,692	3,445,570	+	48,122	"	127	114½	125½	79½
Rohilkund & Kumaon .. ..	572	10.11.34	7,311	—	105	6	44,677	42,536	+	2,141	"	260	225	259½	52½
South India .. .. .	2,526	20.10.34	74,292	+	4,303	29	2,378,076	2,286,052	+	92,024	"	119½	112	117½	61½
Various.															
Beira-Umtali .. .. .	204	Sept., 1934	63,487	+	15,845	52	651,264	502,517	+	148,747	—	—	—	—	—
Bilbao River & Cantabrian ..	15	Nov., 1934	1,614*	—	969	48	18,333	17,992	+	341	—	—	—	—	—
Egyptian Delta .. .. .	621	20.11.34	8,234	—	1,611	33	149,246	140,477	+	8,769	Prf. Sh.	13½	13½	2½	4
Great Southern of Spain ..	104	24.11.34	2,691	—	467	47	105,543	105,876	—	333	Inc. Deb.	4	3	3½	Nil
Kenya & Uganda .. ..	1,625	Mar., 1934	240,520	+	21,064	12	638,137	606,192	+	31,945	B. Deb.	—	—	—	—
Manila .. .. .				—	—				—	B. Deb.	53	33½	48½	7½	Nil
Mashonaland .. .. .	913	Sept., 1934	114,596	+	26,892	52	1,191,218	819,297	+	371,921	I Mg. Db.	91½	4	100	5
Midland of W. Australia ..	277	Oct., 1934	16,764	+	2,383	17	56,354	52,543	+	3,811	Inc. Deb.	89	70	97½	4½
Nigerian .. .. .	1,905	13.10.34	30,202	—	10,372	28	734,646	619,920	—	114,726	"	—	—	—	—
Rhodesia .. .. .	1,538	Sept., 1934	183,340	+	18,488	32	1,993,827	1,505,845	+	487,982	4 p.c. Db.	98½	80½	104½	31½
South African .. .. .	13,217	10.11.34	533,825	+	65,492	32	16,208,185	14,309,215	+	1,898,970	—	—	—	—	—
Victorian .. .. .	6,172	Aug., 1934	740,142	+	27,143	8	1,433,140	1,380,045	+	53,095	—	—	—	—	—
Zafra & Huelva .. .. .	112	Oct., 1934	13,759	+	438	43	116,325	112,900	+	3,425	—	—	—	—	—

\* Rebellion. † Receipts are calculated @ 1s. 6d. to the rupee. ‡ Kartiki Fair, 1933. § ex dividend. Salvador receipts are in currency. The variation in Sterling value of the Argentine paper peso has lately been so great that the method of converting the sterling weekly receipts at the par rate of exchange has proved misleading, the amount being overestimated. The statements from July 1 onwards are based on the current rate of exchange and not on the par value.



5816	5516
378	378
Nil	Nil
3716	3716
578	578
512	512
6916	6916
378	378
5516	5516
7916	7916
584	584
61316	61316
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4	4
Nil	Nil
714	714
5	5
418	418
31518	31518
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